Ogmius

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OGMIUS EXCHANGE

The following Exchange article by Kristen Averyt is extracted from the report "Freshwater Use by U.S. Power Plants: Electricity's Thirst for a Precious Resource" (Averyt et al. 2011). The report—the first on power plant water use and related water stress from the Energy and Water in a Warming World initiative at the Union of Concerned Scientists—is the first systematic assessment of both the effects of power plant cooling on water resources across the United States and the quality of information available to help public- and private-sector decision makers make water-smart energy choices. (See http://www.ucsusa.org/assets/documents/clean_energy/ew3/ew3-freshwater-use-by-us-power-plants.pdf for more details).

Kristen is the Deputy Director of the Western Water Assessment, one of the NOAA-sponsored Regional Integrated Sciences and Assessment (RISA) Programs located across the U.S. focusing on developing climate science relevant to decision makers throughout the Western U.S. Kristen's current research portfolio encompasses a broad suite of climate issues relevant to decision making, including assessing the intersection of renewable energy technologies, water availability, and climate change in the West; evaluating decision-making in the context of climate adaptation; and defining processes for engaging users in the development of climate services. She is also still involved in paleoclimate research related to her dissertation work. Kristen has received several awards and honors, including a Fulbright Fellowship to New Zealand in 1998. After graduate school she was awarded a NOAA Knauss Congressional Fellowship (2005), during which she worked in the U.S. Senate. As the staff scientist for Working Group I of the IPCC, she was one of the many scientists who received the 2007 Nobel Peace Prize. Kristen received a Ph.D. in Geological & Environmental Sciences from Stanford University.

THIS ISSUE

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http://sciencepolicy.colorado.edu/ogmius

FRESHWATER USE BY U.S. POWER PLANTS: INITIAL INSIGHTS INTO THE ENERGY-WATER NEXUS

by Kristen Averyt

Every minute, all the power plants in the United States take in about three times as much water as flows over Niagara Falls. The nation's thermoelectric power plants—which boil water to create steam, which in turn drives turbines to produce electricity—withdraw as much water as farms, and more than four times as much as all U.S. residents. That means lighting rooms, powering computers and TVs, and running appliances requires more water, on average, than the total amount we use in our homes—washing dishes and clothes, showering, flushing toilets, and watering lawns and gardens. Simply, generating electricity requires a lot of water.

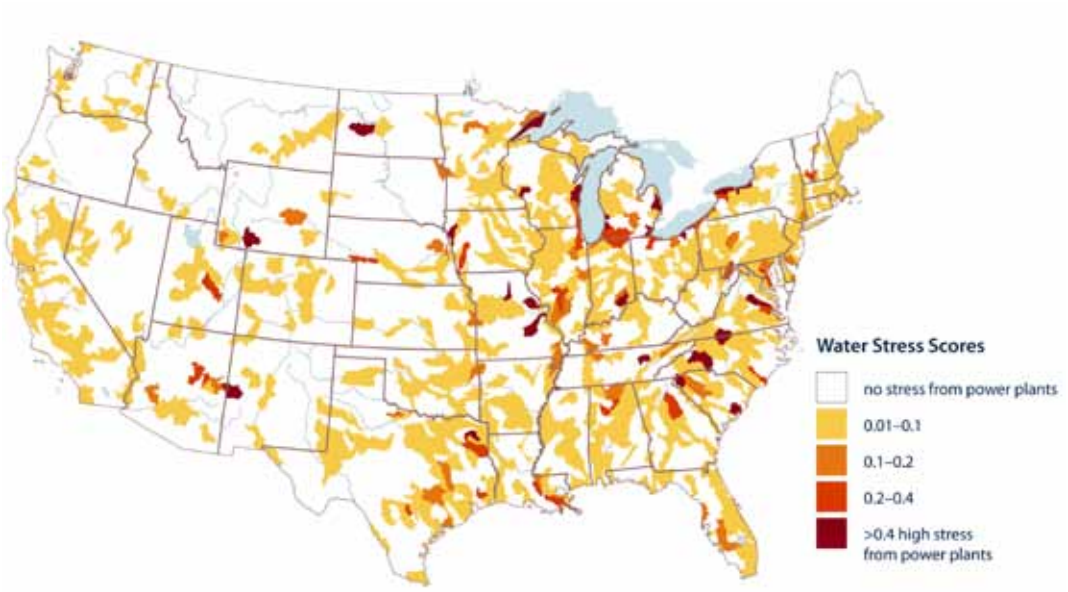
The amount of water necessary depends on the type of power plant: a nuclear power plant uses 8 times as much water per kWh as a natural gas plant, and about 10% more than a coal-fired power plant. Some renewable technologies also require water. Thermal solar plants use as much water as a coal plant per kWh, but wind power uses little to no water. So choices about fuel type and cooling technology have implications for local and regional water sources, and low-carbon does not always mean low-water.

In parts of the U.S., water demand from power plants is combining with pressure from growing populations and other needs and straining water resources—especially during droughts and heat waves. The current drought in Texas is creating tension among farmers, cities, and power plants across the state. At least one plant had to cut its output, and some plants had to pipe in water from new sources. The state power authority warned that several thousand MW of electrical capacity might go offline if the drought persists into spring of 2012. Proposed power plants have also taken hits over water needs. Local concerns about water use have scuttled planned facilities in Arizona, Idaho, Virginia, and elsewhere. Developers of proposed water-cooled concentrating solar plants in California and Nevada have run into opposition, driving them toward dry cooling instead.

Unfortunately, identifying potential vulnerabilities associated with the nexus between water and energy resources has been problematic, as annual water use statistics reported by power plant operators to the U.S. Energy Information Administration (EIA) contain significant inconsistencies, errors, and gaps. Recognizing this problem, we profiled the water use characteristics of virtually every electricity generator in the U.S., and estimated water use (withdrawal and consumption) of those generators based on their reported annual generation in 2008.

A nuclear power plant uses 8 times as much water per kWh as a natural gas plant, and about 10% more than a coal-fired power plant.

Our results show that power plants that did not report their water use to the EIA accounted for 28–30% of total freshwater withdrawals by the electricity sector, and at least 24–31% of freshwater consumption. Some regions of the country did better than others. State-wide reported freshwater use by power plants fell outside the bounds suggested by our analysis in 22 states for withdrawal, and 38 states for consumption. The discrepancies were especially large in the Lower Colorado River and Southeast-Gulf regions, where plant operators reported consumption five times greater—and withdrawals 30% less—than median water-use values would suggest. Such inconsistencies in data can significantly hinder efforts to assess risks to both electricity and water systems.



Where Power Plants Drive Water-Supply Stress (Averyt et al. 2011)

Fortunately, comparison of our analysis with the reported data allowed us to specify where the EIA can improve its water data intake process so that the information is more useful for planning in the energy and water sectors. Indeed, the EIA is addressing many of the issues outlined in our analysis in its 2010 dataset.

Every day in 2008, water-cooled thermoelectric power plants in the United States withdrew 60 billion to 170 billion gallons of freshwater from rivers, lakes, streams, and aquifers, and consumed 2.8 billion to 5.9 billion gallons of that water.

Based on our analysis, every day in 2008, water-cooled thermoelectric power plants in the United States withdrew 60 billion to 170 billion gallons (180,000 to 530,000 acre-feet) of freshwater from rivers, lakes, streams, and aquifers, and consumed 2.8 billion to 5.9 billion gallons (8,600 to 18,100 acre-feet) of that water. Our nation's large coal fleet alone was responsible for 67% of those withdrawals, and 65% of that consumption. Power plants withdrew 84% of their cooling water from rivers and lakes; the balance came mainly from the ocean.

Plants in the East generally withdrew more freshwater per kWh than plants in the West: freshwater withdrawal intensity was 41 to 55 times greater in Virginia, North Carolina, Michigan, and Missouri than in Utah, Nevada, and California. The difference is caused by the relative lack of water efficient technologies in Eastern cooling systems, and the use of non-traditional water sources (e.g. wastewater) by some Western power plants.

Using the results of our analysis, we assessed the stress that power plant water use placed on water systems across over 2,000 U.S. watersheds using the Water Supply and Stress Index (WaSSI). Based on our analysis, in 2008, 400 out of 2,106 watersheds across the country were experiencing water-supply stress. Power plants, by tapping these water resources for cooling purposes, appeared to contribute to water-supply stress in about 80 of these watersheds.

These initial water stress results should serve as an indicator of places to dig deeper and really take a critical look at the nature of water supply and demand, and the role of electric power. For example, in the Southwest, freshwater withdrawals by power plants are relatively small (5%), and little water stress is indicated. But, conflicts over water involving the energy sector may become more problematic in the future. Water availability in the region is a zero-sum game: surface waters are generally considered to be over-allocated, and groundwater levels are consistently declining. This leaves little room to accommodate increasing demands for water resources that growing populations will bring, and the imminent deleterious impacts to water supplies driven by climate change.

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RESEARCH HIGHLIGHT
CHARACTERIZING, CREATING, AND GOVERNING FLORIDA'S HURRICANE RISK
by Jessica Weinkle

This Research Highlight is by Center graduate student Jessica Weinkle. Jessica is a doctoral student at the University of Colorado at Boulder. She holds a master's degree in Climate and Society from Columbia University and a bachelor's degree in zoology from the University of Texas at Austin. Her master's research focused on hurricane risk and, separately, climate change risk perception in South Florida. Jessica's dissertation work, described in this Research Highlight, examines the scientific, political, and social processes of characterizing Florida hurricane risk and windstorm insurance ratemaking.

Florida is highly susceptible to hurricane landfall. Insurance is the predominant means used to manage property losses that occur during these events. In recent decades, public outcry about the rising cost of insurance has led policy makers to reexamine the insurance regime in an effort to reconcile the conflict between the public goals of availability and affordability and the economic sustainability of insurers. Ten years ago, the Florida legislature created Citizens Property Insurance Corporation [Citizens] with the goal of increasing the availability of affordable property insurance. However, insurance costs and public resentment continue to rise, a situation termed in Congress as a 'homeowners insurance crisis.'

Since the early 1990s, perceptions of the Florida hurricane risk have changed for at least four reasons. First, climate change became a prioritized political and scientific matter and part of popular discourse. Second, Hurricane Andrew's landfall south of Miami, FL in 1992 was the greatest natural disaster loss at the time and heightened insurers' concern of insolvency. Third, shortly thereafter, catastrophe modeling became broadly accepted in the insurance industry, changing the process of characterizing risk from one based on historical loss to one of anticipating future losses. Fourth, the federal government moved to expand mortgage lending to properties with affordable housing characteristics.

The effects of human-caused climate change on hurricane insured losses have been a point of contentious debate in the scientific community. While much evidence concludes that the rising cost of hurricane landfalls is due to societal changes, many insurance experts contend that the potential affects of climate change on losses justify its inclusion as a variable in catastrophe models. Because great economic stakes are tied to the models' estimates, catastrophe models have become the subject of intense debates that at times conflate science and politics. Nonetheless, ratemaking is inherently a political process that seeks to incorporate social objectives, such as affordable housing, into the pricing of insurance. Affordability (a social value) and insurability (a technological limitation)

can conflict in practice and the right rate is some negotiated balance between these two competing ends. The inability to clearly define the probabilities of hurricane risk challenges Citizens' ability to meet the goal of affordable property insurance because as uncertainty about the risk increases, meeting criteria of insurability means that rates should increase to decrease the probability of insolvency, and as a consequence affordability decreases.

This dissertation seeks to inform the ratemaking decision process by gleaning insight from three research projects. First, global hurricane landfall characteristics are analyzed to assess and quantify risks based on the historical record. Second, the dissertation conducts an evaluation of Florida windstorm rate policies in terms of insurability and affordability to document how trade-offs are made in practice in the face of uncertainty, politics and economics. Lastly, a policy appraisal of Citizen's progress toward meeting its legislatively mandated goals seeks to develop a suite of options for how decision makers might effectively compromise between various publicly-stated goals for Florida's hurricane policies.

Jessica Weinkle
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CENTER NEWS
New Course on Using Media to Communicate Positive Solutions for Climate Change

CSTPR faculty member Max Boykoff will be collaborating with Beth Osnes of CU's Theater and Dance department to offer a new course this spring, "Inside the Greenhouse: Using Media to Communicate Positive Solutions for Climate Change" (http://sciencepolicy.colorado.edu/students/envs4100-01). The interdisciplinary course will combine Osnes's narrative theory with the science, politics and policy of climate change taught by Boykoff. Boykoff was highlighted in New York Times Andrew Revkin's blog on the new course:

> This week, at the University of Colorado, Boulder, Professor Beth Osnes from the Department of Theater and Dance and I begin teaching a new interdisciplinary course called 'Inside the Greenhouse.' (We are embarking on this interdisciplinary effort thanks to funding from local residents Grace and Gordon Gamm.)
>
> In the class, we'll be working to understand and engage with how climate issues are/can be communicated and framed, by analyzing previously created expressions from a variety of media (interactive theater, film, fine art, performance art, television programming, blogs for examples) and then we'll be creating a show by the same name that'll contain interviews and student work. Our program 'Inside the Greenhouse' will be produced also in the spirit of the James Lipton-led 'Inside the Actors Studio' [a course at my school, Pace University] that has been such an effective vehicle for interrogating and enhancing the 'process' behind the 'product' of performance content.

> At present, Beth and I have 40 eager students from a variety of majors and disciplines signed up for the course, with others on a waiting list to get in. Based on early feedback that we've received on the course plans, students seem like they're aching for these new opportunities to improve on what Dan Kahan has called "the cultural meaning of how the issue is framed". In other words, through our collaborative work over the semester, we are going to work to "break the Nerd Loop" as Randy Olson puts it, and find resonance with everyday people.

Read more at: http://dotearth.blogs.nytimes.com/2012/01/18/climate-in-classrooms/#more-41865.

CENTER NEWS
Graduate Student, Visitor and Alumni News

John Berggren gave a talk at the Upper Colorado River Basin Water Forum in Grand Junction on October 31st titled "Addressing Uncertainty and Discussing Institutional Reform in the Colorado River Basin under a Changing Climate." He also attended the 2011 Annual Meeting of the Colorado River Water Users Association in Las Vegas December 14-16.


John Berggren

Kelsey Cody completed his M.S. in Environmental Studies in the Water and Society track/secondary core under Doug Kenney. The title of his thesis is "Climate Change, Growth, and Regional Integration: Lessons for Colorado's Front Range Municipal and Industrial Water Providers." Kelsey is moving on to the Ph.D. program in ENVS (his dissertation is related to adaptation) and teaching with the Program for Writing and Rhetoric. Congrats Kelsey!!


Kelsey Cody

The Center welcomes Sarah Trainor, a visitor from the University of Alaska Fairbanks. At UA, Sarah is a Research Assistant Professor and also a coordinator at the Alaska Center for Climate Assessment and Policy. Sarah conducts research related to human dimensions of climate change in Alaska. She gave a talk in our Noontime Seminar series on March 5.


Sarah Trainor

NEW PUBLICATIONS

Anderson, R.F., D. Bronk, K.J. Davis, R.S. DeFries, A.S. Denning, L. Dilling, R.B. Jackson, A. Jacobson, S. Lohrenz, G. Marland, A.D. McGuire, G.A. McKinley, A.M. Michalak, C. Miller, B. Moore III, D.S. Ojima, B. O'Neill, J.T. Randerson, S.W. Running, C.L. Sabine, B. Sohngen, P.P. Tans, P.E. Thornton, S.C. Wofsy, and N. Zeng (2011), A U.S. Carbon Cycle Science Plan. A report of the University Corporation for Atmospheric Research supported by NASA, DOE, USDA, USGS, NOAA, NSF, and NIST , 69 pp., August, http://sciencepolicy.colorado.edu/admin/publication_files/2011.29.pdf.

Executive Summary: Understanding of the Earth's carbon cycle is an urgent societal need as well as a challenging intellectual problem. The impacts of human-caused changes on the global carbon cycle will be felt for hundreds to thousands of years. Direct observations of carbon stocks and flows, process-based understanding, data synthesis, and careful modeling are needed to determine how the carbon cycle is being modified, what the consequences are of these modifications, and how best to mitigate and adapt to changes in the carbon cycle and climate. The importance of the carbon cycle is accentuated by its complex interplay with other geochemical cycles (such as nitrogen and water), its critical role in economic and other human systems, and the global scale of its interactions.

The need for improved understanding of the global carbon cycle and better research coordination led to the development of the first U.S. Carbon Cycle Science Plan, published more than a decade ago. That document outlined a plan for land, atmosphere, and ocean observations; manipulative experiments; and Earth-system modeling to improve our understanding of the contemporary carbon cycle and our ability to predict its future.

The development of a new Plan was initiated by the U.S. Carbon Cycle Interagency Working Group (CCIWG) and the Carbon Cycle Science Steering Group (CCSSG), and outlines a strategy for refocusing U.S. carbon cycle research based on the current state of the science. The development of this Plan was led by a committee of 25 active members of the carbon cycle research community, and the result is intended to provide U.S. funding agencies with information on community-based research priorities for carbon cycle science over the next decade. The Plan emphasizes the long-lived, carbon-based greenhouse gases, carbon dioxide (CO2) and methane (CH4), and the major pools and fluxes of the global carbon cycle. The recommended research is global in scale, and there is therefore a strong need for international cooperation and collaboration… Read more at **http://sciencepolicy.colorado.edu/admin/publication_files/2011.29.pdf**.

Boykoff, M. (2011), COP17: Global vs Local Solutions. Think Africa Press December 1, http://thinkafricapress.com/cop17/behalf-world.

Excerpt: Critical decisions about our collective future rapidly unfold in the interstices of human institutions and the environment. Prominently nested here are considerations about how we protect ourselves from the climate - adaptation - and the climate from us - mitigation.

A number of scholars have worked to make sense of these high stakes, high profile and highly-politicised interactions. Among them, Simon Dalby has noted in his work, climate mitigation and adaptation decision-making pose significant challenges not just for the climate and environment, but also for the resilience of institutions as multiple scales of governance. Furthermore, climate change is a diffuse and global issue that reaches across many cultures and requires massive amounts of resources over many generations. Each of these characteristics have impeded substantive policy progress on contemporary climate change to date… Read more at **http://thinkafricapress.com/cop17/behalf-world**.

Boykoff, M. (2012), A dangerous shift in Obama's 'climate change' rhetoric, Washington Post, January 27, http://www.washingtonpost.com/opinions/a-dangerous-shift-in-obamas-climate-change-rhetoric/2012/01/26/gIQAYnwzVQ_story.html.

Excerpt: What happened to "climate change" and "global warming"? The Earth is still getting hotter, but those terms have nearly disappeared from political vocabulary. Instead, they have been replaced by less charged and more consumer-friendly expressions for the warming planet.

President Obama's State of the Union address Tuesday was a prime example of this shift. The president said "climate change" just once — compared with zero mentions in the 2011 address and two in 2010. When he did utter the phrase, it was merely to acknowledge the polarized atmosphere in Washington, saying, "The differences in this chamber

may be too deep right now to pass a comprehensive plan to fight climate change." By contrast, Obama used the terms "energy" and "clean energy" nearly two dozen times ... Read more at **http://www.washingtonpost.com/opinions/a-dangerous-shift-in-obamas-climate-change-rhetoric/2012/01/26/gIQAYnwzVQ_story.html.**


Economies must grow for the climate change fight

Boykoff, M. (2012), Economies must grow for the climate change fight. The Guardian January 16, http://www.guardian.co.uk/environment/2012/jan/16/climate-change-green-economy.

Excerpt: These days, dormant climate policy in Washington D.C. is like Mitt Romney's coiffure: seemingly no prospects for change. And, with the 2012 U.S. presidential election on the horizon, it seems there'll be little federal action for at least another year. In fact, debates among Republican presidential candidates earlier in January saw climate change mentioned only once. It was Romney himself who invoked "the c-word" when he reminded Newt Gingrich of his mistaken support for climate action in the form of cap and trade legislation (which Gingrich has since recanted).

But beyond the current wedge-issue politics and culture wars on offer with climate and environment issues, the "climate problem" suffers from a more powerful and enduring force: economic stagnation. As such, immediate worries of job security and economic well-being have taken precedence in the collective conscience and public discourse… Read more at **http://www.guardian.co.uk/environment/2012/jan/16/climate-change-green-economy**.


Improving Societal Outcomes of Extreme Weather in a Changing Climate: An Integrated Perspective

Morss, R.E., O.V. Wilhelmi, G.A. Meehl, and L. Dilling (2011), Improving Societal Outcomes of Extreme Weather in a Changing Climate: An Integrated Perspective. Annual Review of Environment and Resources, 36, pp. 1-25, http://sciencepolicy.colorado.edu/admin/publication_files/2011.32.pdf.

Abstract: Despite hazard mitigation efforts and scientific and technological advances, extreme weather events continue to cause substantial losses. The impacts of extreme weather result from complex interactions among physical and human systems across spatial and temporal scales. This article synthesizes current interdisciplinary knowledge about extreme weather, including temperature extremes (heat and cold waves), precipitation extremes (including floods and droughts), and storms and severe weather (including tropical cyclones). We discuss hydrometeorological aspects of extreme weather; projections of changes in extremes with anthropogenic climate change; and how social vulnerability, coping, and adaptation shape the societal impacts of extreme weather. We find four critical gaps where work is needed to improve outcomes of extreme weather: (a) reducing vulnerability; (b) enhancing adaptive capacity, including decision-making flexibility; (c) improving the usability of scientific information in decision making; and (d) understanding and addressing local causes of harm through participatory, community-based efforts formulated within the larger policy context… Read more at **http://sciencepolicy.colorado.edu/admin/publication_files/2011.32.pdf**.


CHAPTER 11
COMMUNICATING CLIMATE CHANGE: CLOSING THE SCIENCE-ACTION GAP

Moser, S.C. and L. Dilling (2011), Communicating Climate Change: Closing the Science-Action Gap. The Oxford Handbook of Climate Change and Society 161-174, Oxford University Press, September, http://sciencepolicy.colorado.edu/admin/publication_files/2011.30.pdf.

Excerpt: The first decade of the twenty-first century was a big one for climate science and policy. Climate change steadily rose on the policy agenda of nations, regions, states, and cities. Ironically, it was also the decade in which public opinion vacillated on the reality of climate change and its human causation. Public opinion surveys dipped to new lows in the U.S., the U.K., and Australia at the end of 2009 (Hanson 2009; Riddell and Webster 2009; Pew Research Center 2009b). Amidst what was called the greatest economic 'downturn' since the Great Depression, and a cooler, less extreme year in many regions across the globe, public concern about global warming dropped significantly even as scientific findings of accelerating impacts proliferated (e.g. Solomon et al. 2007). Commentators suggest the world is seeing a case of 'apocalypse fatigue' (Nordhaus and Shellenberger 2009)... Read more at **http://sciencepolicy.colorado.edu/admin/publication_files/2011.30.pdf**.

Newell, P., Boykoff, M., and Boyd, E. (2012), The New Carbon Economy: Constitution, Governance and Contestation. Wiley-Blackwell, 208 pp., http://www.wiley.com/WileyCDA/WileyTitle/productCd-1444350226.html.

The New Carbon Economy provides a critical understanding of the carbon economy. It offers key insights into the constitution, governance and effects of the carbon economy, across a variety of geographical settings.

Pielke, Jr., R. A. (2011), Lessons of the L'Aquila Lawsuit. Bridges 31, October, http://www.ostina.org/content/view/5928/1534.

Excerpt: In 1997 the city of Grand Forks, North Dakota, saw devastating flooding that caused billions of dollars in damage. Remarkably, that spring flood could be seen coming for months in advance, since the rising waters were the consequence of melting snow that had accumulated over the winter. Yet, even with the ability to anticipate the record flood crest long in advance, the community was taken by surprise by the flood, with some residents having to evacuate in the middle of the night as rising waters threatened their homes.

Following the disaster, I was a member of the U.S. National Weather Service team sent to investigate the production and use of forecasts where something had obviously gone badly wrong. The lessons from that experience can help to shed some light on the current situation in L'Aquila, Italy, where seven officials are currently embroiled in a lawsuit brought by the affected community over statements the officials had made prior to the deadly earthquake in April, 2009… Read more at **http://www.ostina.org/content/view/5928/1534.**

Pielke, Jr., R. A. (2011), Innovation Policy Lessons of the Vasa. Bridges 32, December, http://www.ostina.org/content/view/6150/1560.

Excerpt: On a chilly day in Stockholm last month, I visited the Vasa museum (http://vasamuseet.se/en). Situated on the waterfront, the museum holds a sailing ship that sank in the Stockholm harbor on its maiden voyage in 1628. The ship had barely made it a kilometer from the dock that fateful August day, when it began to roll, letting water into its open cannon ports and then quickly sinking to the bottom. The Vasa took with it the lives of about 40 people and only the top of its tallest mast was left above water. The ship was raised in 1961, and in 1990 was moved to its current location in a giant building that holds the restored ship in its entirety.

The Vasa was to be a technological marvel of its day, during a period when "international competitiveness" had a familiar meaning. Based on the perception that Sweden was losing ground in the race for naval technology, particularly to neighboring Denmark, Swedish King Gustav II Adolph (better known in English as Gustavus Adolphus) had commissioned the bigger and better-armed Vasa. As I explored the museum that day, I couldn't help but think that the tragedy of the Vasa and its fate since that day more than 380 years ago hold lessons for how we think about contemporary innovation policies… Read more at **http://www.ostina.org/content/view/6150/1560.**

Pielke, Jr., R. A. (2011), Politics is about acting alike, not thinking alike. Bulletin of the Atomic Scientists, Published December 15 2011, http://thebulletin.org/web-edition/roundtables/when-politicians-distort-science#rt8959.

Roger has his final installment in the Roundtable with Robert Socolow and Randy Olson at the Bulletin of the Atomic Scientists. The subject is how scientists should react "When Politicians Distort Science."

Excerpt: I'd like to return to discussing Socolow's central claim that science is under attack and needs defending from the anti-science brigades.

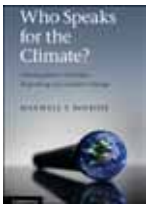
In short, I find the evidence for such a claim sorely lacking. In these cynical times, science is among the few institutions in society that is held in high regard. (Others include the military and first responders to disasters.) The most recent survey of public attitudes about science by the National Science Foundation found that 84 percent of Americans expressed support for government funding of basic research, and Americans have more favorable attitudes toward the promise of science and technology for our future than do Europeans. Further, Americans ranked scientists higher in prestige than 23 other occupations (and at a level similar to firefighters), a view that has remained virtually unchanged in the 35 years that the NSF has conducted its surveys.

These data hardly show an institution under attack or even a loss of support for science. Yet Socolow warns ominously that "an age of darkness could lie ahead" and worries about the "alienation of large segments of the public from the scientific enterprise." I have a hard time making sense of such general expressions of extreme concern, which are by no means unique to our exchange… Read more at **http://thebulletin.org/web-edition/roundtables/when-politicians-distort-science#rt8959.**

See also Roger's blog post on the roundtable discussion: http://rogerpielkejr.blogspot.com/2011/12/conclusion-of-roundtable-at-bulletin-of.html.

PUBLICATIONS
Praise for Center Publications

Max Boykoff's New Book "Who Speaks for the Climate?"



Max Boykoff published his new book 'Who Speaks for the Climate?' in November. It was highlighted in the December issue of CU Connections: http://connections.cu.edu/people/assistant-professor-asks-%E2%80%98who-speaks-for-the-climate%E2%80%99 as well as CU's Arts & Sciences Magazine: http://artsandsciences.colorado.edu/magazine/2011/12/who-speaks-for-the-climate-2. The book has been selected as one of Scotsman Environmental Books of the Year: http://www.scotsman.com/the-scotsman/books/scotsman_books_of_the_year_environment_1_1990525.

ABC News Blog Praises Roger Pielke, Jr.'s The Climate Fix

Sean Sublette, a broadcast meteorologist at ABC News 13 in Virginia, gave a positive review of Roger Pielke's book The Climate Fix on his station's Weather Expert's blog, http://www.wset.com/story/15110376/a-more-realistic-approach-to-climate-science.

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

On Thursday, September 27 we will celebrate CSTPR's 10th anniversary. This all-day event will feature three debates, a panel discussion by our alumni about life after CSTPR, a reception, and a prominent keynote speaker. Additional details will be provided in the next newsletter.

CENTER EVENTS
CSTPR Spring 2012 NOONTIME SEMINAR SERIES

SPRING 2012 SERIES
MONDAYS 12:00 - 1:00 PM
Going to Extremes:
Science and Social Response

All talks will be held in the CSTPR Conference room on the CU Boulder campus (unless otherwise noted *) from 12:00 - 1:00 PM. Free and open to the public.

More Info: http://sciencepolicy.colorado.edu/news/seminars_spring2012.html. Join our mailing list at http://sciencepolicy.colorado.edu/news/center_talks.html to receive notices of upcoming talks and presentations.

March 5 at 12:00 PM
Climate Change Adaptation in Alaska: Who is Doing What?
Location: CSTPR Conference Room
by Sarah Trainor, Alaska Center for Climate Assessment and Policy, University of Alaska Fairbanks

March 12 at 12:00 PM
Characterizing, Creating and Governing Florida's Hurricane Risk
Location: CSTPR Conference Room
by Jessica Weinkle, CU Environmental Studies Program

*** March 19, 2012 at 12:00 PM**
Panel Discussion - A Hard Look at 'Srex': The IPCC Special Report on Extremes
Location: IBS Building, Room 155A
Panel Convenor: William Travis, Center for Science and Technology Policy Research, University of Colorado

April 2 at 12:00 PM
Making Climate Change Local: High-Resolution Downscaling of Extreme Precipitation Projections in the Colorado Front Range
Location: CSTPR Conference Room
by Kelly Mahoney, Earth System Research Laboratory, NOAA

*** April 9 at 12:00 PM**
Wag the Dog: Ethics, Accuracy and Impact of the Science of Extremes in Political Debates
Location: CIRES Auditorium
by Roger Pielke, Jr., Center for Science and Technology Policy Research, University of Colorado Boulder

April 30 at 12:00 PM at 12:00 PM
Challenges in Attribution of Weather and Climate Extremes
Location: CSTPR Conference Room
by Randall M. Dole, Earth System Research Laboratory, NOAA

Center Faculty Presentations

Roger Pielke, Jr.

On February 7, 2012 Roger Pielke, Jr. gave a talk at the The Lowy Institute for International Policy in Sydney, Australia on "Scientists in Policy and Politics".

On February 2, 2012 Roger Pielke, Jr. gave a talk at Australian National University on his book The Climate Fix: What Scientists and Politicians Won't Tell You About Global Warming.

On November 21, 2011 Roger Pielke, Jr. participated in a workshop titled "Democratising Expertise in Theory and Practice: Exploring Knowledge Gaps and New Research Ideas" at Linköping University's Centre for Climate Science and Policy Research. Roger moderated a discussion on "Knowledge gaps, new research ideas".

On October 24, 2011 Roger Pielke, Jr. gave a lecture at the University of Colorado's Computational Optical Sensing and Imaging on "Scientists in Policy and Politics".

Max Boykoff

On March 2, 2012 Max Boykoff was on KGNU's Booktalk program speaking about his 2011 book Who Speaks for Climate? Making Sense of Media Reporting on Climate Change.

On February 8, 2012 Max Boykoff had a book signing event at the Boulder Book Store for his 2011 book Who Speaks for Climate? Making Sense of Media Reporting on Climate Change.

On November 25, Max Boykoff participated in a forum on Climate Change Communication in Mexico City. Max was part of a panel discussion on "Climate change in the media: problems and best practices."

On November 14, Max Boykoff gave a lecture at University of Miami's Abess Center for Ecosystem.

Max Boykoff at the Boulder Book Store, February 8, 2011

On October 6, Max Boykoff attended the Institute for Public Policy Research Media Leaders and Climate Change Round Table 2 Meeting in London. He gave a talk on "The impact of UK and US media coverage on awareness, understanding and political responses around climate change."

CENTER EVENTS

ENVS Spring 2012 Colloquium Series

SPRING 2012 SERIES
3:30 - 5:30 PM

Managing Towards Sustainability

(upcoming talks)

Environmental problems are interdisciplinary by nature. They jump fences. They cross boundaries. They don't respect borders. So what happens when you mix three scholars from different backgrounds and ask them to comment on one topic? Join us and see.

Sponsored by the Environmental Studies Program at the University of Colorado at Boulder and the Center for Science and Technology Policy Research

More Info: http://sciencepolicy.colorado.edu/news/envs-colloquium.html. Join our mailing list at http://sciencepolicy.colorado.edu/news/center_talks.html to receive notices of upcoming talks and presentations.

April 25 at 3:30 PM
Managing $30 Billion for Sustainability: Tracking, Evaluating and Improving 'Fast Start' Climate Change Finance
by J. Timmons Roberts, Center for Environmental Studies, Sociology and Environmental Studies, Brown University
Location: CIRES Auditorium

Commentators: Ashwin Ravikumar, Environmental Studies, University of Colorado Boulder

Carol Wessman, Environmental Studies & Ecology and Evolutionary Biology, University of Colorado Boulder

S&T NEWS

GORDON RESEARCH SEMINAR ON SCIENCE & TECHNOLOGY POLICY

The Gordon Research Seminar on Science & Technology Policy is a unique forum for graduate students, post-docs, and other scientists with comparable levels of experience and education to present and exchange new data and cutting edge ideas. We invite abstract submissions for presentations and posters by scholars and practitioners in: economics, science and engineering, science and technology policy, and science and technology studies.

The theme of the 2012 meeting is "The International Context of Science and Technology Policy". The keynote will discuss conflict, cooperation, collaboration and competition in science and technology policy. We hope (but do not require) that the presentations and posters will raise questions such as:

- Which international institutions, multinational corporations, and non-governmental organizations are demonstrating promising results in collaborative efforts to address global health issues?
- How has international conflict co-produced energy regimes and security?
- Is science and technology policy for energy shaped by an intense competition and/or mutual collaboration between national programs striving towards the Green Economy?

- How does the interest in Global Climate Change affect other global issues and their policy solutions?
- How do multilateral policies shape cooperation around issues of energy, health, and the environment?
- How is civil society implicated in these processes of conflict, cooperation, collaboration and competition?

While covering broad themes of health, energy, and the environment, this particular conference is encouraging junior scholars to examine the international implications of their policy case studies and theory. This seminar will include a career panel of recent graduates who have gone into science and technology policy research or practice.

For more information or to submit your application, please go to the Gordon Research Seminar for Science and Technology Policy 2012 website: http://www.grc.org/programs.aspx?year=2012&program=grs_scipol.

CSTPR STP Certificate Student Awarded the 2012 Emerging Public Policy Leadership Award from the American Institute of Biological Sciences (AIBS)

Lida Beninson, a student enrolled in the Center's Graduate Certificate Program in Science & Technology Policy, has been awarded the 2012 AIBS Emerging Public Policy Leadership Award. Lida Beninson is a Ph.D. candidate in Integrative Physiology at the University of Colorado Boulder... Read more at **http://www.aibs.org/public-policy/news/2012_emerging_public_policy_leaders.html#031950.**

NEW CSTPR VIDEO

Roger Pielke, Jr. gives a lecture entitled 'The Climate Fix' at The Australian National University on February 2, 2012. This talk was presented by the HC Coombs Policy Forum.

http://www.youtube.com/watch?feature=player_embedded&v=6TMrzZqnIPE

Check it out!

S&T Programs at Arizona State University

Professional Science Master's in Science and Technology Policy

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ABOUT US

Ogmius 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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