

# Ogmius



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NEWSLETTER OF THE CENTER FOR SCIENCE AND TECHNOLOGY POLICY RESEARCH

CENTER FOR SCIENCE AND TECHNOLOGY POLICY RESEARCH  
COOPERATIVE INSTITUTE FOR RESEARCH IN ENVIRONMENTAL SCIENCES  
UNIVERSITY OF COLORADO AT BOULDER



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

## Introduction to Ogmius Exchange

This issue of



Ogmius highlights a recent workshop co-organized by Roger Pielke, Jr. - "The Workshop on Reconciling Supply And Demand For Research In The Science Of Science And Innovation Policy." Held in Oslo, Norway in May,

the workshop addressed the question "How can scholars who study science and innovation policy contribute more effectively to the needs of policy makers facing decisions about science and innovation policy?" Roger's reflections follow.

Comments welcome!

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## Ogmius Exchange

### *A Brief Report from a Workshop on Science Policy Research and Science Policy Decisions* *By Roger Pielke, Jr.*

In May, 2009, I co-organized a

workshop with Merle Jacob of the University of Oslo on the role of science and innovation policy research in making science and innovation policy decisions. The workshop, sponsored by the US National Science Foundation (NSF) and the Norwegian Research Council (NRC), was held at the NRC headquarters in Oslo during a few beautiful sunny spring days. Attended primarily by scholars and decision makers from the United States and Norway, it also included a few scholars from the United Kingdom and Sweden. Here are a few of my early reactions from that workshop.



First, the relationship between research on science and decisions about science appears to be gaining more attention in the US and Norway, as well as more broadly across Europe. Second, in spite of increasing attention to the topic of "science of science and innovation policy" the area remains somewhat of a Rorschach test, even for scholars who self-define their work in this area. For instance, even within the United States there is no shared terminology to describe this area of research, much less among scholars across the Atlantic.

Interestingly, scholars from outside this general community could rightly claim to be doing this sort of work. One of the cases we examined was climate research: Here there is considerable discussion about the role of research in decision making, but many scholars are not at all engaged with the community of science and technology policy

## Ogmios Exchange Continued

research or science and technology studies. Better integration of such topical communities with those more historically focused on science and technology as an object of study would benefit both communities.

Third, despite a seeming consensus in the community that a focus on “indicators” does not do justice to the complex relationship between research and the societal outcomes related to research, the community maintains a magnetic-like fixation on identifying indicators of relevance. The focus is on inputs such as funding for various areas of science, as well as outputs such as patents, publications, and citations. Equally irresistible is the urge to engage in cross-national comparisons, with each country’s science policy makers looking for ways to show how their nation is somehow falling behind the competition.

Fourth, even as science policy decision makers appeal to cross-national comparisons to gain the advantage in domestic debates over resource allocation, one of the most surprising

things about our workshop was the ease with which scholars of science and innovation shared a common set of norms and perspectives. Part of this, of course, reflects the fact that Merle and I selected the participants (who were mostly, but not exclusively, social scientists and humanists). But academia today is so thoroughly globalized that its culture and practices know no national boundaries, especially between the United States and Europe.

Fifth, the obstacles that lie between research and its use in other fields are also found in the area of science of science and innovation policy.

We expect to put together a special journal issue from the workshop. In the meantime, you can have a look at details of the event, including a number of very interesting background papers at: [http://sciencepolicy.colorado.edu/rsd\\_for\\_rssip/](http://sciencepolicy.colorado.edu/rsd_for_rssip/).

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## Research Highlight

### Introduction

**T**his Research Highlight describes the work of Ursula Rick, a postdoctoral researcher at the Center for Science and Technology Policy Research. Ursula’s Ph.D research focused on meltwater in the Greenland Ice Sheet. Working in a politically charged science got her interested in science policy, specifically energy and climate policy. Ursula has been working with Lisa Dilling looking at climate change adaptation research. They would like to know who has been calling for what types of adaptation research and who is funding such research. In addition, they would like to find out from stakeholders what kind of research is actually needed for communities to adapt to climate change. Ursula’s other project with Roger Pielke, Jr. is described below.



### Climate Change Metrics and Their Uncertainty By Ursula Rick

**P**olicymakers as well as other stakeholders make decisions about climate change under uncertainty, much of it irreducible, and they often judge information by its source. Scientific data about climate change comes from many sources, including the scientific literature, boundary organizations, and the media.

Within those categories there are many different types of sources of information, each with a different mission and possibly differing political goals.

Due to the nature of science, scientific literature can often have seemingly contradictory results, and this becomes a problem when the issue is of political importance. As Andrew Revkin, environmental reporter for the *New York Times*, has written, when scientific findings are not consistent, “the news media and advocates of all stripes dive in. Under nonstop scrutiny, conflicting findings can make news coverage veer from one extreme to another, resulting in a kind of journalistic whiplash for the public.” The same is no doubt true for policymakers.

This project seeks to understand how the reporting of various metrics of climate change in the mainstream media, in the scientific literature, by advocacy groups and by boundary organizations has affected the debate over climate change. The first metric focused on is sea level rise projections to the year 2100. I searched seven newspapers (*New York Times*, *Washington Post*, *Los Angeles Times*, *Financial Times*, *The Times* (London), *The Guardian* and *The Telegraph*) and two scientific news outlets (*Science News* and *Nature News*) for reports on sea level rise. In each article, I looked for global sea level rise projections for the year 2100 and any associated uncertainty. The media reports were compared to the sea level rise projections from the IPCC Assessment Reports.

## Research Highlight Continued

Surprisingly, the sea level rise projections to 2100 reported in newspapers have not changed significantly in the last 20-25 years. The average reported projection over the mainstream media is less than 1 meter of sea level rise by 2100, and the UK newspapers reported average greater sea level rise projections than the US newspapers. There have been very small trends in the reported numbers over time with the largest increase in reported sea level rise projections coming from The Times and the Washington Post, and the largest decrease in reported projections coming from The Financial Times. The reported uncertainty in the projections ranges from 0 to almost 2 meters and has also changed very little over time. Like the mainstream media, the reported sea level rise projections in the science news outlets have virtually no trend with time, but the average reported projections are significantly less than the mainstream media reports. The

IPCC projections have decreased from the 1st through the 4th Assessment Reports (WGI). It should be noted, however, that the 4th Assessment Report is widely thought to greatly underestimate future sea level rise because the effects of dynamic loss from glaciers and ice sheets were not taken into account.

The continuation of this project will include gathering similar data on global mean temperature projections, CO<sub>2</sub> concentration targets and other metrics commonly used in climate change dialogue. I will also include more scientific assessment report data and delve deeper into what metrics and uncertainty advocacy groups are reporting to policymakers and other stakeholders.

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## Center News

### *Roger Pielke Jr. Launches New Blog, Retires Prometheus*

Our popular science policy blog, Prometheus, has been retired. We will keep the Prometheus archive up and available

(<http://sciencepolicy.colorado.edu/prometheus/>) but there will be no new posts. Many thanks to our Prometheus readers and contributors over the years. If you would like to read announcements and news from the Center for Science and Technology Policy Research please visit our website at <http://sciencepolicy.colorado.edu/>.

Roger Pielke, Jr., will continue his insightful, provocative blogging at his new site, <http://rogerpielkejr.blogspot.com/> (please update your bookmarks accordingly!). Sample posts from Roger's new blog:

#### **Target 1939: A Case for Absolute Baselines**

There has been some occasional chatter about the use of relative baselines in setting targets for greenhouse gas emissions, with some folks arguing for using a 1990 baseline and others suggesting 2005. How silly. How about just using absolute baselines? The following examples use carbon dioxide emissions.

If the world wants to achieve an 80% reduction in carbon

dioxide emissions below 1990 levels this really means returning to 1939 levels of emissions.

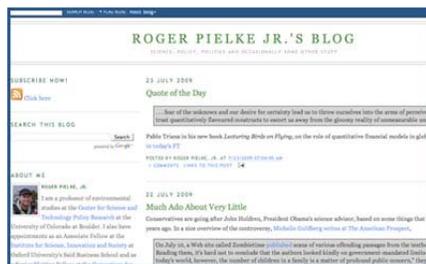
For the US, a 17% reduction in carbon dioxide emissions below 2005 levels (such as in the Waxman-Markey Bill) represents a return to about 1990 levels. An 80% reduction represents a return to 1905 levels... Read more at: <http://rogerpielkejr.blogspot.com/2009/06/target-1939-case-for-absolute-baselines.html>.

#### **How to Get Climate Policy Back on Course**

A report from a worldwide consortium of research institutes led by Oxford and the London School of Economics and Political Science argues that climate policy needs to focus on improving energy efficiency and decarbonising the energy supply, as opposed to setting emissions targets.

With the G8 set to meet in Italy this week, a report from a worldwide consortium of research institutes is arguing that the only policies that will work are those which focus on improvement in energy efficiency and the decarbonisation of energy supplies.

The report, published by the Institute for Science, Innovation and Society at the University of Oxford and the London School of Economics and Political Science's Mackinder Programme, argues that this approach is more effective than a model based on emissions targets... Read more at: <http://rogerpielkejr.blogspot.com/2009/07/how-to-get-climate-policy-back-on.html>.



## Center News

### Top Five Prometheus Posts

Below are the Prometheus posts that generated the largest number of comments.



#### #1 The Collapse of Climate Policy and the Sustainability of Climate Science February 7th, 2009 | 129 Comments

**T**he political consensus surrounding climate policy is collapsing. If you are not aware of this fact you will be very soon. The collapse is not due to the cold winter in places you may live or see on the news. It is not due to years without an increase in global temperature. It is not due to the overturning of the scientific consensus on the role of human activity in the global climate system.

It is due to the fact that policy makers and their political advisors (some trained as scientists) can no longer avoid the reality that targets for stabilization such as 450 ppm (or even less realistic targets) are simply not achievable with the approach to climate change... Read more at: <http://sciencepolicy.colorado.edu/prometheus/the-collapse-of-climate-policy-and-the-sustainability-of-climate-science-4939>.

#### #2 David Whitehouse on Royal Society Efforts to Censor September 21st, 2006 | 107 Comments

**D**avid Whitehouse is a former online science editor for the BBC. He has sent a letter to Benny Peiser, a prominent climate provocateur from the University of Liverpool who oversees the CCNet mailing list. Benny included Dr. Whitehouse's correspondence on the Royal Society's letter to ExxonMobil in his compilation yesterday. There is also apparently a second letter from the Royal Society to journalists, asking them to ignore people with perspectives outside the IPCC consensus.

Let me say in no uncertain terms that in my opinion the actions by the Royal Society are inconsistent with the open and free exchange of ideas, as well as the democratic notion of free speech. Here in the U.S. we have recently won a battle to allow scientists employed by government to speak... Read more at: <http://sciencepolicy.colorado.edu/prometheus/david-whitehouse-on-royal-society-efforts-to-censor-3941>.

#### #3 Politics and the IPCC, Again March 1st, 2006 | 104 Comments

**A**nyone with concerns about the politicization of the IPCC, and its stance of "policy neutrality," should raise an eyebrow at recent stories from the BBC and The Guardian. Leaking information before the report has gone

through full review smacks of overt politicking. But more generally, those doing the leaking and their representations of what will be found in the IPCC are far from "policy neutral." Perhaps it is time for the IPCC to dispense with the illusion of being policy neutral and simply admit its political agenda. As far as the "news" that has been leaked, it is hardly news. According to the Guardian: A draft of the next influential Intergovernmental Panel on Climate Change (IPCC) report will tell politicians that scientists are now unable to place a reliable upper limit on how quickly the atmosphere will warm as... Read more at: <http://sciencepolicy.colorado.edu/prometheus/politics-and-the-ipcc-again-3750>.

#### #4 The Helpful Undergraduate: Another Response to James Annan May 16th, 2008 | 102 Comments

**I**n his latest essay on my stupidity, climate modeler James Annan made the helpful suggestion that I consult a "a numerate undergraduate to explain it to [me]." So I looked outside my office, where things are quiet out on the quad this time of year, but as luck would have it, I did find a young lady named Megan, who just happened to be majoring in mathematics who agreed to help me overcome my considerable ignorance. The first thing I had to do was explain to Megan the problem we are looking at. I told her that we had 55 estimates of a particular quantity, with a mean of 0.19 and standard deviation of 0.21. At the same time we had 5 different observations of that same quantity, with a mean of -0.07 and standard deviation of 0.07. I wanted to know how similar or different from... Read more at: <http://sciencepolicy.colorado.edu/prometheus/the-helpful-undergraduate-another-response-to-james-annan-4419>.

#### #5 The Swindle Ruling, British Culture, and Freedom of Expression July 22, 2008 | 84 Comments

**I**f you are paying attention to the latest dust up over climate change then you know that a judgment has been rendered by the relevant British authority (OFCOM) on complaints about the airing of a controversial documentary by UK Channel 4 challenging consensus climate science and politics, titled The Great Global Warming Swindle. The decision has led to a wide range of reactions and commentary (e.g., NYT's Andy Revkin, Climate Audit's Steve McIntyre, former IPCC chairman Bob Watson, and many, many others). Here I'd like to address several points that have nothing to do with the substance of the complaint... Read more at: <http://sciencepolicy.colorado.edu/prometheus/the-swindle-ruling-british-culture-and-freedom-of-expression-4483>.

## Center News

### *Max Boykoff to join CSTPR*

**W**e are thrilled to announce that Max Boykoff will be joining our Center this summer as a faculty member. Most recently Max was a Research Fellow in the Environmental Change Institute (ECI) as well as a Department Lecturer in the School of Geography and the Environment at the University of Oxford. He was previously affiliated with Christ Church College as a Postdoctoral Fellow. From 2006-2008, Max was a James Martin 21st Century Research Fellow at the University of Oxford ECI. Through this fellowship, he was involved in both the Climate Change Research Cluster and the Environmental Governance and Climate Policy groups. He holds a Ph.D. in Environmental Studies from the



University of California-Santa Cruz and Bachelor of Sciences from Ohio State University. His research interests include interactions between state and non-state actors at the interface of environmental science, policy and practice. Woven through these endeavors, he has engaged in two primary research areas: the cultural politics of climate change, and transformations of carbon-based economies and societies. Max's work includes analysis of the media's treatment of climate change – see for example *The Real Swindle* (<http://www.nature.com/climate/2008/0803/full/climate.2008.14.html>).

Max will give a talk "*An Inconvenient Celebrity? Promises and Pitfalls of Celebrity Involvement in Climate Change Science, Policy and the Public*" at the Center on Monday, October 26, 2009. The talk will be from 12-1 pm in the CSTPR Conference Room (directions: [http://sciencepolicy.colorado.edu/about\\_us/find\\_us.html](http://sciencepolicy.colorado.edu/about_us/find_us.html)), and is free and open to the public.

## Center News

### *New Research Project on Drought Vulnerability*

**T**he Center has a new Western Water Assessment-funded project, "A Drought Impact and Vulnerability Indicator Suite". Led by Center director Bill Travis with research assistant Kristin Gangwer, this project will create a set of indicators for assessing the impacts of drought across different sectors (urban, agricultural, water, recreation), with the goal of developing both research-quality time series that can be normalized and analyzed for trends, and applied

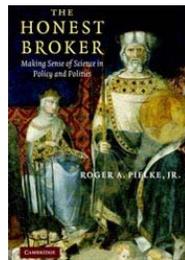


indicators that can help managers assess impacts and changing vulnerabilities. The search for and collection of indicators goes back a long way in impacts research, so there is a track record to build on. However, a lack of continuity, and changes in baselines, vulnerabilities, and monitoring programs, have made it difficult to develop indicators useful for inter-comparison. The project will canvass existing indicators and determine the appropriate time scales and geographical frameworks for measuring drought impacts and vulnerability, with an initial focus on the Interior West. Indicators will be made available on the Center and Western Water Assessment websites.

## Center News

### *The Honest Broker Reviewed*

**R**oger Pielke's book *The Honest Broker* was recently reviewed by Kevin Curry and Susan Clark in the journal *Policy Sciences* (<http://www.springerlink.com/content/7245507x703980gh/fulltext.html>). Here are a few excerpts from the very positive review:



*"Roger Pielke Jr. offers a way to sort through the complicated relationships between scientists and decision making. His perceptive, clearly worded, and engaging book offers both important academic insights and a model of professional practice for anyone wishing to*

*engage effectively with politics and policy."*

*"Some reviewers (e.g., Rosenberg 2007; Skolnikoff 2008) disapprove of Pielke's criticism of issue advocacy, but they seem to miss the crux of his argument. Pielke does not argue against issue advocacy. In fact, he argues that all four of the roles he describes for scientists are 'critically important and necessary in a functioning democracy' (p. 7). Pielke's argument is simply that scientists should clearly identify when they are acting as issue advocates. They should not obscure their goal and standpoint by using the assumptions of the linear model of science, or assume value consensus is present when it is not, or claim to be concerned with intelligence when they are actually concerned with promotion."*

## Center in the News

**R**oger Pielke's critique of the Global Humanitarian Forum's estimate that 300,000 deaths per year were due to climate change as "a methodological embarrassment and poster child for how to lie with statistics" received the attention of the New York Times, Washington



Post, Nature, Salon, Telegraph, and New American. His views on climate policy under the Obama administration have been cited by the New Scientist and Wall Street Journal.

Dave Cherney's letter to the editor about wolf management in Yellowstone National Park appeared in Boulder's Daily Camera.

To read these and other news articles about the Center see: <http://sciencepolicy.colorado.edu/outreach/news.html>.

## Alumni News

**C**enter alum **Erik Fisher**, Ph.D., who is currently an assistant research professor at Arizona State University's Center for Nanotechnology in Society (CNS-ASU), and David H. Guston, Ph.D., director of CNS-ASU, have been awarded a three-year, \$540,000 grant from the National Science Foundation. The grant will support the Socio-Technical Integration Research Project (STIR), which will study the extent to which collaborations between social and natural scientists working alongside one another in research laboratories may advance responsible innovation. The STIR project coordinates 20 such studies in laboratories in North America, Western Europe and East Asia.



STIR will train ten doctoral students from a number of social science and humanities perspectives to each carry out paired laboratory studies based on a research method developed by Fisher, the project's principal investigator, in his doctoral research at the University of Colorado at Boulder. The research this NSF grant is based on was initially conducted through CSTPR.

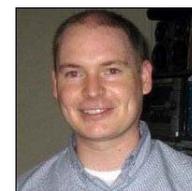
In August, Fisher will become a tenure-track assistant

professor in ASU's Department of Political Science and will retain a research appointment at the Consortium for Science, Policy and Outcomes (CSPO), which houses CNS-ASU.

**Genevieve Maricle**, who received her Ph.D in Environmental Studies and has been working as a postdoctoral associate with the Consortium for Science Policy Outcomes at ASU, received a 2009-2010 AAAS Diplomacy Fellowship which will place her in the U.S. Agency for International Development (USAID), where she will work in areas of international science policy as it relates to the agency's mission to extend assistance to countries recovering from disaster, trying to escape poverty, and engaging in democratic reforms.



**Shep Ryan**, who received his Masters in Environmental Studies and served on the staff of the U.S. House of Representatives Committee on Science in Washington, D.C. from 2005 until 2009, recently accepted a position with the Government Accountability Office as an Analyst.



## Center Talks and Presentations

### *Bill Travis Panel Discussion About Ethical Issues in Geo-engineering*

**C**enter director Bill Travis took part in a panel discussion titled "From Research to Field Testing and Deployment: Ethical Issues Raised By Geo-engineering." The panel was part of the National Academies' workshop "Geo-engineering Options to Respond to Climate Change: Steps to Establish a Research Agenda." The purpose of the workshop was to inform the work of the America's Climate Choices (<http://americasclimatechoices.org/>) panels and steering committee by examining a number of proposed "geo-engineering" approaches, or interventions in the climate



system designed to diminish the amount of climate change occurring after greenhouse gases or radiatively active aerosols are released to the atmosphere, with an emphasis on the research needed to better understand the potential efficacy and consequences of the various approaches.

Travis argued that experience with weather modification indicates a public willingness to accept interventions like cloud seeding for water resources, but a strong public aversion to larger-scale interventions like hurricane modification. His paper is available at: <http://spot.colorado.edu/~wtravis/>.

## Center Talks and Presentations

### *Reflections on the Copenhagen International Scientific Congress Meeting*

**I**n March 2009 the University of Copenhagen hosted an international scientific congress on climate change (<http://climatecongress.ku.dk/presentations/>). The main aim of the congress was to provide a synthesis of existing and emerging scientific knowledge necessary in order to make intelligent societal decisions concerning application of mitigation and adaptation strategies in response to climate change. The scientific congress took place in anticipation of the United Nations Climate Change Conference (COP-15), which will be held in Copenhagen November-December



2009. The Danish government will hand over the results of the scientific congress to decision makers at COP-15.

Several CU researchers and graduate students, including the Center's Lisa Dilling, Betsy Failey, and Marilyn Averill, attended the Copenhagen meeting. The Center organized a discussion forum on April 13 to allow participants to reflect on their experiences at the meeting. A major theme of the discussion was the demand by policy-makers in the final plenary session for firm guidance on what constituted "dangerous" climate change, and the difficulty of translating global change science outcomes into such socially-defined thresholds.

## Center Talks and Presentations

### *Other Talks*

**Erik Fisher**, ENVS graduate and Assistant Research Professor, Consortium for Science, Policy & Outcomes (CSPO), Department of Political Science, Arizona State University, returned to CSTPR this summer to give a talk about the "Two Cultures" in Science Policy Today.



*Erik Fisher,  
June 2009*

**Peter Hoppe**, head of Geo Risks Research Department, Munich Reinsurance Company, Munich, Germany, gave a talk about trends in natural disasters shown by Munich Re's natural catastrophes database.

**Roger Pielke, Jr.**, gave a talk at UC-Berkeley titled "The Efficiency Illusion and other Energy Myths: Why Cap & Trade Won't Work -- and What Can". Tom Fuller, SF Environmental Policy Examiner of Examiner.com, covered Roger's talk and provides a nice overview. The Fuller articles, as well as Roger's Powerpoint, can be found at: <http://rogerpielkejr.blogspot.com/2009/07/slides-from-my-berkeley-lecture.html>.

**Shali Mohleji**, Environmental Studies and Center graduate student, gave a talk "The Politics of Gulf Coast Restoration" as part of the ENVS Colloquium series "Restoring the Earth: no easy answers."

## Center Talks and Presentations

### *Fall 2009 Noontime Seminar Talks*

#### **September 14, Krister Andersson**

University of Colorado, Political Sciences Department, "Community Self-Governance of Forests in Bolivia"

#### **September 21, Robert Frodeman**

University of North Texas, Department of Philosophy and Religion Studies, "What is Interdisciplinarity?"

#### **September 28, Sonia Akter**

Australian National University, "Estimating non-market values under scenario and policy uncertainty: the case of climate change mitigation in Australia"

#### **October 5, Rad Bylerly**

Center for Science and Technology Policy Research, "The Colorado Air Quality Control Commission"

#### **October 19, Deserai Anderson Crow**

CU Center for Environmental Journalism, "Recreational water rights in Colorado"

#### **October 26, Max Boykoff**

Center for Science and Technology Policy Research, "An Inconvenient Celebrity? Promises and Pitfalls of Celebrity Involvement in Climate Change Science, Policy and the Public"

#### **November 2, Ursula Rick**

Center for Science and Technology Policy Research, "Climate Change Metrics and Their Uncertainty"

#### **November 16, Marilyn Averill**

Center for Science and Technology Policy Research, "The Role of the Courts in U.S. Climate Policy"

All talks are free and open to the public and held at the Center's conference room from 12:00-1:00 pm. For directions see: [http://sciencepolicy.colorado.edu/about\\_us/find\\_us.html](http://sciencepolicy.colorado.edu/about_us/find_us.html). To be notified of upcoming talks join our mailing list: <http://sciencepolicy.colorado.edu/mailman/listinfo/events/>.

*Co-sponsored by the Center for Science and Technology Policy Research and the Institute of Behavioral Science, Environment and Society Program*

Recent Publications

The following represents a sample of the numerous publications authored by Center staff. For a complete, searchable list, with online versions of most articles, visit our Publications page: <http://sciencepolicy.colorado.edu/publications>.

**Cherney, D., 2009. Kennedy, Sheila S., God and Country: America in Red and Blue. Policy Sciences 42:189–191.**

**Excerpt:** It requires little imagination to believe that the United States is a polarized nation. Divisive discourses about issues such as abortion, gun control, the definition of marriage, immigration reform, and climate change often leave little room for compromise or finding common ground. In God and Country:

America in Red and Blue, Sheila Kennedy of Indiana University’s School of Public and Environmental Affairs argues that the popular religious-secular dichotomy used to understand persistent policy conflicts obscures our ability to recognize the root of political disagreement in this country. In her detailed study of American perspectives, Kennedy outlines an alternative framework that she insists better captures the true nature of American conflict... Read more at [http://sciencepolicy.colorado.edu/admin/publication\\_files/resource-2726-2009.12.pdf](http://sciencepolicy.colorado.edu/admin/publication_files/resource-2726-2009.12.pdf).



**Pielke Jr., R.A., 2009. Collateral Damage from the Death of Stationarity. GEWEX, May, pp. 5-7.**

**Excerpt:** In February, 2008, a group of authors writing in *Science* declared that insofar as water management is concerned, stationarity is dead (Milly et al., 2008). What they mean by this claim is that water management decisions can no longer proceed under the assumption that “the idea that natural systems fluctuate within an unchanging envelope of variability.” The authors assert that both scientists and decision makers have long been aware of human disturbances and climate

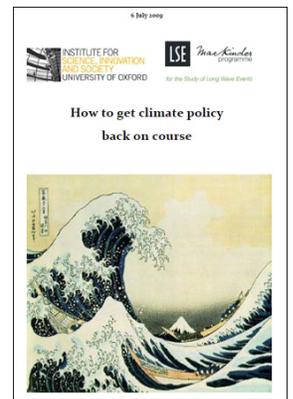


variations and their effects on the water cycle, but have historically considered these effects “to be sufficiently small to allow stationarity-based design.” Such assumptions allowing for stationarity-based design, they argue, are no longer valid. Stationarity is dead.

The authors of the *Science* article assert that the cause of the death of stationarity is human-caused climate change resulting from the emission of greenhouse gases. However, some scholars have argued that treating natural systems as stationary has always been a mistake. Such arguments are frequently found in relation to the water cycle, for instance, in discussion of the often misused notion of the 100-year flood. Stationarity, these scholars might say, has always been dead. But whether or not natural systems are stationary in the absence of greenhouse gas emissions misses the larger point that the assumptions of stationarity that have underpinned water management for many decades are increasingly viewed as flawed. Consequently, there is a need to consider alternatives to stationarity-based policies... Read more at: [http://sciencepolicy.colorado.edu/admin/publication\\_files/resource-2725-2009.11.pdf](http://sciencepolicy.colorado.edu/admin/publication_files/resource-2725-2009.11.pdf).

**Prins, G., Cook, M., Green, C., Hulme, M., Korhola, A., Korhola, E.R., Pielke, Jr., R., Rayner, S., Sawa, A., Sarewitz, D., Stehr, N., and H. von Storch, 2009. How to get climate policy back on course. Institute for Science, Innovation and Society, Oxford University and London School of Economics, The Mackinder Programme, LSE.**

Roger Pielke, Jr. co-authored a new report “How to get climate policy back on course.” The authors argue that “Because climate policy performs so many other sorts of political, religious and psychological work, it has tremendous momentum within it. Part of that momentum has been brutally halted by the recession. We should profit from this; and so we argue that we should not only learn the lessons of this surprise. We should switch decisively to a radically different but also very familiar approach to policy which focuses upon actions that have worked in the past and which we know to be politically feasible. This track stands in contrast to current conventional wisdom which, oddly, is grounded upon policies that have not worked in the past and which we



Recent Publications Continued

know never to have been politically feasible except through the application of unacceptable political forces.”  
 Read more at: <http://www.sbs.ox.ac.uk/NR/rdonlyres/6E0B4E96-3ECA-427B-8D86-1C241D04AACC/0/climatepolicybackcourse.pdf>.

**Pielke, Jr., R. A., 2009. The British Climate Change Act: A Critical Evaluation and Proposed Alternative Approach, Environmental Research Letters, Vol. 4(2).**

**Abstract:** This paper evaluates the United Kingdom's Climate Change Act of 2008 in terms of the implied rates of decarbonization of the UK economy for a short-term and a long-term target established in law. The paper uses the Kaya identity to structure the evaluation, employing both a bottom up approach (based on projections of future UK population, economic growth, and technology) and a top down approach (deriving implied rates of decarbonization consistent with the targets and various rates of projected economic growth). Both approaches indicate that the UK economy would have to achieve annual rates of decarbonization in excess of 4 or 5%. To place these numbers in context, the UK would have to achieve the 2006 carbon efficiency of France by about 2015, a level of effort comparable to the building of about 30 new nuclear power plants, displacing an equivalent amount of fossil energy. The paper argues that the magnitude of the task implied by the UK Climate



Change Act strongly suggests that it is on course to fail, and discusses implications... Read more at: <http://iopscience.iop.org/1748-9326/4/2/024010/?ejredirect=.iopscience>.

**Vranes, K., and R. A. Pielke, Jr., 2009. Normalized Earthquake Damage and Fatalities in the United States: 1900 - 2005, Natural Hazards Review, August, pp. 84-101.**

**Abstract:** Damage estimates from 80 U.S. earthquakes since 1900 are “normalized” to 2005 dollars by adjusting for inflation, increases in wealth, and changes in population. Factors accounting for mitigation at 1 and 2% loss reduction per year are also considered. The earthquake damage record is incomplete, perhaps by up to 25% of total events that cause damage, but all of the most damaging events are accounted for. For events with damage estimates, cumulative normalized losses since 1900 total \$453 billion, or \$235 billion and \$143 billion when 1 and 2% mitigation is factored, respectively. The 1906 San Francisco earthquake and fire adjusts to \$39–\$328 billion depending on assumptions and mitigation factors used, likely the most costly natural disaster in U.S. history in normalized 2005 values. Since 1900, 13 events would have caused \$1 billion or more in losses had they occurred in 2005; five events adjust to more than...  
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role of scientific evidence in the law, and the social responsibilities of scientists.

Please send an electronic copy of the paper to: Robert Talisse at [robert.talisse@vanderbilt.edu](mailto:robert.talisse@vanderbilt.edu), and a hardcopy to:

Robert Talisse  
Editor PAQ  
Philosophy Department  
111 Furman Hall  
Vanderbilt University  
Nashville, TN 37240

## S&T Opportunities

### Postdoctoral Association Position, Center for Nanotechnology in Society at Arizona State University

**T**he Center for Nanotechnology in Society at Arizona State University (CNS-ASU) seeks to fill one POST-DOCTORAL ASSOCIATE position in the societal implications of nano-



scale science and engineering (NSE) starting Fall 2009. The post-doctoral associate will hold the title of coordinator for private sector outreach and will collaborate with CNS-ASU researchers on the Center's private sector outreach activities. S/he will also perform significant independent research on issues pertaining to NSE and the private sector and contribute to educational programs. The fellowship is available for one year and renewable for additional years. For more information see the position description at [http://cns.asu.edu/files/posi\\_090522-postdoc.pdf](http://cns.asu.edu/files/posi_090522-postdoc.pdf).

## S&T Opportunities

### Associate Director, Washington, DC Office, Consortium for Science, Policy and Outcomes, Arizona State University

**T**he Consortium for Science, Policy and Outcomes at Arizona State University (CSPO-ASU) seeks an Associate Director for the Washington, DC office to help implement an agenda of science policy analysis, engagement, and education



applicable to a broad range of critical social policy challenges. The incumbent will assess opportunities across the policy community in the Washington, DC area, developing relationships with key science policy actors, to design and manage the Washington, DC office-based projects. For more information see the position description at: [http://www.cspo.org/documents/job\\_CSPO-DC-AssocDirector.pdf](http://www.cspo.org/documents/job_CSPO-DC-AssocDirector.pdf).

## S&T Opportunities

Please see other recent job postings on our jobs page: <http://sciencepolicy.colorado.edu/students/jobs.html>:

- Point Carbon, Managing Director Advisory Services



- Stockholm Environment Institute, Post-doctoral Research Fellow, Swedish Forestry Policy Analysis

## S&T Opportunities

**DISCCRS V**  
**Interdisciplinary Climate Change Research**  
**Symposium**  
**13-20 March 2010**  
**Saguaro Lake Ranch, AZ**

**T**he  
 Dissertations  
 Initiative for  
 the



Advancement of Climate Change Research (DISCCRS, pronounced discourse), connects natural and social scientists engaged in research related to climate change, impacts and solutions. The goal is to broaden perspectives and establish a collegial peer network to address climate challenges at the interface of science and society. A report and list of participants from the most recent symposium is available at [http://disccrs.org/reports/DISCCRS\\_IV\\_Symposium\\_Report.pdf](http://disccrs.org/reports/DISCCRS_IV_Symposium_Report.pdf).

During the week-long symposium -- held in the Tonto National Forest near Phoenix, Arizona -- participants will present and discuss their research, hone interdisciplinary communication and team skills, and discuss emerging research, societal and professional issues with each other and with established researchers invited to serve as mentors. Confirmed mentors include Julia E. Cole (University of Arizona), Jonathan T. Overpeck (University of Arizona), Billie L. Turner (Arizona State University), and David A. Randall (Colorado State University).

Participation will be limited to thirty-four early career scholars identified by an interdisciplinary committee of research scientists based on review of submitted applications.

### **Application Deadline**

**31 August 2009**

Participation limited to thirty-four early career scholars. Airfare and on-site expenses supported by the National Science Foundation  
<http://disccrs.org/>

### **Eligibility**

PhD requirements completed April 1, 2007 - July 31, 2009. Selection will favor applicants who plan to engage in interdisciplinary research careers in any subject within or relevant to climate change, its impacts and solutions. We encourage applicants from the natural and social sciences, economics, mathematics, engineering, or any other field so long as the research focus relates to climate change, its

impacts or solutions. While the emphasis is on the U.S. research system, we welcome applicants from all countries who are interested in learning about the U.S. research system and connecting with U.S. researchers.

### **Symposium Application instructions**

<http://disccrs.org/symphelp.html>

### **Register your PhD dissertation and search for other recent climate change dissertations**

(over 900 PhDs have added their dissertation abstract on climate change to this database).

<http://disccrs.org/register.html>

### **Electronic newsletter**

with jobs and other time-sensitive announcements is available to those who register dissertations.

### **Public webpage**

includes the dissertation registry, numerous early career resources, and symposium application instructions.

<http://disccrs.org/>

### **Society Sponsors**

AAG, AERE, AGU, AMS, ASLO, ESA, ESS-ISA, STEP-APSA, TOS and USSEE.

### **Organizers**

Ronald B. Mitchell, University of Oregon; Paul H. Yancey, Whitman College; Jennifer R. Marlon, University of Oregon; and Ruth A. Ladderud, Whitman College.

### **Funding**

This Symposium is funded by the U.S. National Science Foundation through grants to the University of Oregon and Whitman College.

### **Contact**

[info@disccrs.org](mailto:info@disccrs.org)

For a printable color poster of information about DISCCRS V in PDF format, please go to:

<http://disccrs.org/DISCCRSposter.pdf>

## About Us

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