From: **Mary Wood** mwood@uoregon.edu
Subject: Re: Climate Accountability Workshop Report Review
Date: September 6, 2012 at 2:44 PM
To: Eric St.Jacques [redacted]
Cc: mwood@law.uoregon.edu, Peter Frumhoff [redacted]

HI Eric and Peter - sorry for the delay. I'm on sabbatical and email is sporadic. Will get you any comments by Monday (or assume the draft is ok with me). Thanks. Mims

Mary Christina Wood
Philip H. Knight Professor
Faculty Director, Environmental and
Natural Resources Law Program
University of Oregon School of Law
1515 Agate St.
Eugene, OR 97403-1221
(541) 346-3842
mwood@law.uoregon.edu

On Sep 6, 2012, at 1:56 PM, Eric St. Jacques wrote:

> A quick reminder that the deadline for the report review comments was Tuesday. We have received a number of good comments thus far, but if there is anything you would like to add, please respond immediately. If we do not hear by Monday morning, we will assume the draft is ok with you.
>
> Best,
> Eric
>
> ---
>
> **From:** Eric St. Jacques
> **Sent:** Wednesday, August 22, 2012 9:09 AM
> **To:** [redacted]; 'glantz@medicine.ucsf.edu'; [redacted]; 'pslovic@uoregon.edu'; [redacted]; 'mwood@law.uoregon.edu'; [redacted]
> **Cc:** 'noreskes@ucsd.edu'; Peter Frumhoff; [redacted]; Angela L. Anderson; Seth Shulman; Brenda Ekwurzel
> **Subject:** Climate Accountability Workshop Report Review
>
> Dear participants in the June 14-15 *Climate Accountability, Public Opinion and Legal Strategies* workshop,
>
> On behalf of the workshop organizers, I am very pleased to share with you the attached final draft report of our rich workshop discussions. Drafted by Seth Shulman at UCS, this report seeks to capture key highlights of our meeting for our collective use, and for use by other colleagues in our community who could not attend.
>
> As discussed at the workshop, we are asking each of you to review the report. While comments on any aspect of the text would be welcome, we are in particular asking you to focus your review on the following:

- Attribution of remarks: Please make sure that statements attributed to you are accurate.
- Confidentiality: Please make sure that we do not include any statements that you requested to be treated as confidential;
- References: There are several points highlighted in the text where we lack key references. If you have them, please send a full reference, so we may cite them appropriately.

We are intending to finalize the report by Monday, September 10. Toward that end, please send your review comments to me by no later than **Tuesday, September 4**.

Best regards,

Eric St. Jacques
Executive Department Program Associate
Union of Concerned Scientists | 2 Brattle Square | Cambridge, MA 02138-3780 | 617-301-8016

From: **Mary Wood** mwood@uoregon.edu [redacted]
Subject: Fwd: Climate Accountability Workshop Report Review
Date: September 6, 2012 at 2:43 PM
To: Mary Wood mwood@law.uoregon.edu

MW

Mary Christina Wood
Philip H. Knight Professor
Faculty Director, Environmental and
Natural Resources Law Program
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1515 Agate St.
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Begin forwarded message:

From: "Eric St. Jacques" <EStJacques@ucsusa.org>
Date: August 22, 2012 6:09:27 AM PDT
To: [redacted] '"glantz@medicine.ucsf.edu"' <glantz@medicine.ucsf.edu>, [redacted] '"pslovic@uoregon.edu"' <pslovic@uoregon.edu>, [redacted] '"mwood@law.uoregon.edu"' <mwood@law.uoregon.edu>,
Cc: '"noreskes@ucsd.edu"' <noreskes@ucsd.edu>, Peter Frumhoff [redacted], "Angela L. Anderson" [redacted], Seth Shulman [redacted], Brenda Ekwurzel [redacted]
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Climate Accountability, Public Opinion, and Legal Strategies

Workshop Summary

Martin Johnson House
Scripps Institution of Oceanography
La Jolla, CA, June 14-15 June 2012

REVIEW DRAFT

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Climate Accountability, Public Opinion, and Legal Strategies

Workshop Summary

Martin Johnson House, Scripps Institution of Oceanography, La Jolla, CA
June 14-15 2012.

Contents

Climate Accountability, Public Opinion, and Legal Strategies Workshop

Martin Johnson House, Scripps Institution of Oceanography, La Jolla, CA
June 14-15 June 2012.

Preface

For many years after scientists first concluded that smoking causes cancer, the tobacco companies continued to win court cases by arguing that no specific cancer deaths could be attributed to cigarette smoking. At some point, however, the tobacco companies began to lose legal cases against them even though the science had not substantively changed. Juries began to find the industry liable because tobacco companies had known that their products were harmful even while publicly denying the evidence.

To explore how this transformation happened, and to assess lessons for climate change, the Union of Concerned Scientists and the Climate Accountability Institute brought together 25 leading scientists, lawyers and legal scholars, historians, social scientists and public opinion experts for a June 14-15, 2012 workshop at the Scripps Institution of Oceanography in La Jolla, California.

Specifically, the workshop sought to compare the evolution of public attitudes and legal strategies for tobacco control and anthropogenic climate change, asking whether we might use the lessons from tobacco education, laws, and litigation to address climate change. The workshop explored which impacts can be most compellingly attributed to climate change, both scientifically, and in the public mind. Participants also considered options for how best to communicate the scientific understanding of attribution to maximize public understanding, mitigation and adaptation strategies.

The workshop explored the degree to which the prospects for climate mitigation would increase with public acceptance (including judges and juries) of the causal relationships among fossil fuel production, carbon emissions, and climate change. Participants debated the viability of diverse strategies, including the legal merits of targeting carbon producers – as opposed to carbon emitters – for US-focused climate mitigation. And finally, the group sought to identify the most promising and mutually reinforcing intellectual, legal, and/or public strategies to moving forward.

We are pleased to share the outcome of our workshop discussions. Among the many points of discussion and debate captured in this report, we highlight the following:

- A key breakthrough in the public and legal case for tobacco control came when internal documents showing that the tobacco industry had knowing mislead the public came to light. Similar documents may well exist in the vaults of the fossil fuel industry and their trade associations and front groups – and many possible approaches to unearthing them.

- Drawing upon the forthcoming "carbon majors" analysis by Richard Heede, it may be feasible – and highly valuable - to characterize and publicize the attribution of important changes in climate, such as sea level rise, to specific major carbon producers. Public health advocates made effective use of similar attribution of health impacts to major tobacco companies.

- While we lack a compelling public narrative about climate change today in the United States, we may be close to coalescing around one. Furthermore, climate may loom larger today in the public mind than tobacco did when public health advocates began winning policy victories. Progress towards a stronger public narrative on climate might be aided by use of a "dialogic approach" in which climate advocates work in partnership with the public. Such a narrative must be

both robust and emotionally resonant to cut through the distraction and uncertainty that has made it possible for the fossil fuel industry to sow confusion.

Naomi Oreskes
University of California, San Diego

Peter C. Frumhoff
Union of Concerned Scientists

Richard Heede
Climate Accountability Institute

Lewis M. Branscomb
Scripps Institution of Oceanography

Angela Anderson
Union of Concerned Scientists

Climate Accountability, Public Opinion, and Legal Strategies Workshop
Martin Johnson House, Scripps Institution of Oceanography, La Jolla, CA
June 14-15 June 2012.

1. Introduction

For decades after tobacco firms in the United States became aware of strong scientific evidence linking smoking to cancer in the mid-1950s, the tobacco industry adopted a public relations strategy that knowingly sought to confuse the public about the safety of its products. As we now know, tobacco industry lawyers advised the companies early on that any admissions that they were selling a hazardous product would leave them open to potentially crippling liability claims. So, despite the scientific evidence, the industry developed and implemented a sophisticated disinformation campaign designed to deceive the public about the hazards of smoking and to forestall governmental controls on tobacco consumption.

As time went on, a scientific consensus emerged about a multitude of serious dangers from smoking. On January 11, 1964, for instance, the United States government released the first report of the Surgeon General's Advisory Committee on Smoking and Health specifically warning the public of the link between smoking and lung cancer.[1] Nonetheless, the tobacco industry's disinformation campaign continued. As internal documents have long since revealed, the tobacco companies quickly realized they did not need to prove their products were safe. Rather, they had only to implement a calculated strategy to "maintain doubt" on the scientific front. As one famous internal memo from the Brown & Williamson tobacco company put it: "Doubt is our product, since it is the best means of competing with the 'body of fact' that exists in the minds of the general public."[2]

It has become increasingly clear for more than a decade that the fossil-fuel industry has adopted much the same strategy that long worked so successfully for

tobacco companies—attempting to "manufacture uncertainty" about global warming even in the face of overwhelming scientific evidence that it is accelerating at an alarming rate and poses a myriad of public health and environmental dangers. Not only has the fossil fuel industry taken a page from the tobacco playbook in their efforts to defeat action on climate change, they even share with the tobacco industry a number of key players and a remarkably similar network of public relations firms and nonprofit "front groups" that are now actively sowing disinformation about global warming.[3]

At this pivotal moment for climate change, with international agreement all but stymied and governmental action in the U.S. largely stalled, the Union of Concerned Scientists and the Climate Accountability Institute felt that it could be especially helpful to try to build a clearer understanding of the drivers of change that eventually proved effective in the tobacco experience. To be sure, lawyers played a huge role; scientific evidence played an important role as well. But notably, neither science nor legal strategies alone drove the changes in public understanding of the health dangers posed by smoking. In particular, workshop participants were asked to share their perspectives on a key question that grew out of the tobacco experience, namely: given the power and resources of tobacco industry, how *were* tobacco control efforts able to finally gain traction?

When I talk to my students I always say, tobacco causes lung cancer, esophageal cancer, mouth cancer…My question is: what is the "cancer" of climate change that we need to focus on?

—Naomi Oreskes

By gathering a distinguished and complementary assemblage of experts, the Climate Accountability Workshop created the conditions for an extraordinarily well-informed discussion about the history of tobacco control as an example for climate change: exploring many aspects of the way in which science, in combination with law, public advocacy, and possibly new technology, can spur a seminal shift in public

understanding and engagement on an issue of vital importance for the global community.

What follows in this report is a summary of the workshop designed to highlight some of the major themes that emerged over the course of two intensive days of structured dialogue. Because the discussion was often animated and wide-ranging, this report does not attempt to portray a comprehensive account of all the ideas presented, but rather summarizes some of the key findings that emerged.

2. Lessons from Tobacco Control: Legal and Public Strategies

Workshop participants began by reviewing the history of tobacco control in the United States in an effort to identify lessons that might be useful for action on global warming. One key point that emerged from the discussion is that the history of efforts at tobacco control stretches back much further than most people generally realize. Before the American Tobacco Company was broken up as a result of the Sherman Anti-Trust Act of 1890, several U.S. states banned tobacco entirely between 1890 and 1920 in an effort to fight corruption in response to concerns that the powerful tobacco industry was paying off legislators. Those bans were all overturned after successful lobbying efforts by the industry. Nevertheless, a landmark legal case—*Austin v. Tennessee*—set an important precedent in 1900 that upheld the legal right of states to ban tobacco.[4]

Equally important was a reminder to participants that the battle for tobacco control continues today, even though substantial gains have been achieved over the past several decades. In a point made forcefully by Robert Proctor, a historian of science who frequently serves as an expert witness in ongoing tobacco litigation, "tobacco is not over." While the number of cigarettes smoked worldwide is down from its peak of 770 billion in 1997, some 350 billion cigarettes were sold in 2011. Today in the United States, more than 45 million American adults continue to smoke; some 8 million live with a serious illness caused by smoking; and more than 400,000 Americans continue to die prematurely each year as a result of tobacco use.[5]

In terms of the long fight for tobacco control, a few principles emerged. One is that any legal strategies involving court cases require plaintiffs, a venue, and law firms willing to litigate—all of which present significant hurdles to overcome. Robert Proctor generalized about the history of litigation on tobacco by noting that most often tobacco opponents won with simplicity but lost in the face of complexity. As he noted, it is worth remembering that, "The industry can win with complexity by making you have to pass a thousand hurdles any one of which can derail the whole effort." Also notable is the fact that that public victories can occur even when cases are lost in court. In one legal effort that sought to get tobacco research off campus at Stanford University, for instance, the

plaintiffs lost the case, but the public outcry over the issue led Phillip Morris to stop its external research programs anyway [REF].

The Importance of Documents in Tobacco Litigation

Perhaps the most important lesson to emerge from the discussion of the history of tobacco litigation is the importance of bringing to light internal industry documents. Roberta Walburn, a key litigator in the pathbreaking case *State of Minnesota and Blue Cross and Blue Shield of Minnesota v. Philip Morris et. al. [C1-94-8565]* explained that her legal team, with the strong backing of then-Minnesota Attorney General Hubert "Skip" Humphrey, made it a goal from the start of the lawsuit to use the process of legal discovery to gain access to documents and make them part of the public domain. Walburn noted that Humphrey was mocked and scorned by many of his colleagues for this emphasis, but it proved to be a key to achieving a landmark settlement in the case.

In the Minnesota case, the breakthrough came in a flood of internal documents that began to emerge from the legal discovery process in the case in the 1990s. For three decades prior to the 1970s, the tobacco industry had not lost a single legal case nor been forced to release a single industry document. A glimpse of the tremendous value of the industry's memos came in the 1980s when a paralegal leaked some internal tobacco documents. By making documents a key part of the Minnesota litigation, the legal discovery process in that case was able to finally bring a large cache of industry documents to light—ultimately wresting some 35 million pages of documents from the tobacco industry.[6]

Of course, the release of so many documents in the Minnesota lawsuit also presented immense challenges, requiring the legal team to pore over the emerging documents one page at a time. Meanwhile, over the course of many years of litigation, the tobacco industry fought tirelessly to prevent the release of damaging information. During this period, Philip Morris spent some $1.2 million dollars each week in legal fees [REF]. Throughout this lengthy process, the industry went to great lengths to hide

documents, listing them under different corporate entities, laundering science through attorneys to attempt to claim attorney-client privilege, and playing word games in document indices in order to claim that they didn't have any documents on the topics sought by the plaintiffs.

In the end, however, the documents proved crucial in helping to shift the focus of litigation away from a battle of the experts over the science of causation of disease and toward an investigation of the conduct of the industry. As Roberta Walburn explained, their legal team was able to say to the judge: "You don't have to believe us or our experts; just look at the companies' own words." The strategy of prying documents from the industry also proved effective because, once a lawsuit begins, litigants are required by law to retain permissible evidence. The very first order issued by the judge in the Minnesota case was a document preservation order, which meant that the industry could be held in contempt of court if they failed to comply. Technically speaking, companies are required to preserve documents if they think they might pertain to possible future litigation.

Today, the documents that have emerged from tobacco litigation have been collected in a single, searchable, online repository. The so-called Legacy Tobacco Document Library (available at legacy.library.ucsf.edu) now contains a collection of some 80 million pages of documents from the tobacco industry. Stanton Glantz, a professor of cardiology at the University of California at San Francisco (UCSF) who directs the project, noted the importance of the decision to create an integrated collection accessible to all for the tobacco documents. He emphasized that one advantage of an integrated collection is that it becomes a magnet for attracting more documents from disparate sources.

Because the Legacy Collection's software and infrastructure is already in place, Glantz suggested that it could be a possible home for a parallel collection for documents from the fossil-fuel industry pertaining to climate change. In compiling such a collection,

he stressed the need to think carefully about which companies and which trade groups might have documents that could be especially useful. And he underscored the point that the goal of bringing documents to light must be established as an independent objective of the litigation or else the most valuable documents will be unlikely to be made public.

Documents Helped Establish a Conspiracy

In the case of tobacco litigation, the release of documents from the industry became front-page news in the 1990s. Notably, though, the headlines did not tout the fact that tobacco causes lung cancer, a fact that had already been widely reported. Rather, attention focused on: the tobacco industry's lies to the public; its efforts to target children in its marketing campaigns; and its manipulation of nicotine in its cigarettes to increase the likelihood of addiction [REF]. These facts about the industry had not come to the public's attention until the industry's internal documents came to light.

Importantly, the release of internal tobacco documents ultimately meant that charges of conspiracy could become a crucial component of tobacco litigation. Formerly secret documents revealed that the heads of tobacco companies had colluded on a disinformation strategy as early as 1953.[7]

Sharon Eubanks, who prosecuted a case against the tobacco industry brought by the U.S. Department of Justice during the Clinton administration, noted the importance of documents in her case as well, which depended even more heavily on establishing a conspiracy. The case, *U.S.A v. Phillip Morris, Inc.* was initially filed after then-President Bill Clinton directed the Attorney General to attempt to recover from the tobacco industry the costs of treating smokers under Medicare. The Justice Department brought the case under the Racketeer Influenced and Corrupt Organizations (RICO) statute that was originally enacted to combat organized crime.

In the case, tobacco companies were found liable for violating RICO by fraudulently covering up the health risks associated with smoking and for marketing

their products to children. Although the tobacco companies appealed the ruling, the three-judge panel of the U.S. Court of Appeals unanimously upheld the decision in 2009, finding the tobacco companies liable. The court upheld most of the ordered remedies, but denied additional remedies sought by public health interveners and the Department of Justice. The court also dismissed the defendants' argument that their statements were protected by the First Amendment, holding that the First Amendment does not protect "knowingly fraudulent" statements [REF].

Commented [sms1]: Can one of the lawyer participants offer language for the footnote here about the difference between "knowingly fraudulent" and "knowingly false"? Making false statements is certainly protected, but under what conditions does it become fraudulent? When product sales, advertising, or profit motives are involved? Thanks!

Lessons for the Climate Community

One theme to emerge from the review of tobacco litigation was the connection and overlap between the tobacco industry's disinformation campaign and the fossil-fuel industry's current efforts to sow confusion about climate change. As one participant put it, "The tobacco fight is now the climate fight." Both industries have adopted a strategy of disseminating disinformation to manufacture uncertainty and forestall governmental action. In so doing, both industries have placed corporate interests above the public interest. Several participants presented detailed evidence of the close ties between the two industries in terms of personnel, nonprofit "front groups," and funders.

Especially given these close connections, many participants emphasized the prospect that incriminating documents may exist that demonstrate collusion among the major fossil-fuel companies, trade associations, and other industry-sponsored groups, as well as companies' knowledge that the use of their products is damaging to human health and well-being, and s exacerbates rather than prevents "dangerous anthropogenic interference with the climate system"[8]

Finally, participants agreed that most of the litigation questions regarding how the courts might rule on climate change cases remain unanswered. Most participants also agreed that pursuing a legal strategy against the fossil-fuel industry would present a number of different obstacles and different opportunities than litigants faced in fights against the tobacco industry. As Roberta Walburn noted, however, the two efforts do

share an important public-interest imperative. As she put it: in both cases, “people have been harmed and there should be justice. If you want to right a wrong you have to be bold.”

3. Climate Legal Strategies: Options and Prospects

A wide array of potential legal strategies were discussed at the workshop. Participants agreed that a variety of different approaches could prove potentially successful in spurring action and public engagement to curb global warming, with suggestions ranging from lawsuits brought under public nuisance law that forms the basis for almost all current environmental statutes (unless you mean litigation?), to libel claims against firms and front groups that malign the reputations of climate scientists.

Several of the participants warned of the potential polarizing effect of lawsuits. While it is never an easy decision to bring a lawsuit, they noted, litigants must understand that if they pursue such a course they should expect a protracted and expensive fight that requires careful planning. Among the issues discussed were the importance of seeking documents in the legal discovery process as well as the need to choose plaintiffs, defendants, and legal remedies wisely. Another issue of concern was the polarizing potential for slowing down the broad cultural shift in public perception (see section 5).

Strategies to Win Access to Internal Documents

While the tobacco experience amply illustrates the importance of seeking documents in the legal discovery process, lawyers at the workshop emphasized that there are many effective avenues for gaining access to internal documents.

First of all, participants explained, lawsuits are not always required to win the release of documents. As one participant noted, congressional hearings can yield documents. In the case of tobacco, for instance, the famous "Doubt is our Product" document came out after being subpoenaed by Congress for a hearing.[9]

State attorneys general can also subpoena documents, raising the possibility that a single sympathetic state attorney general might be able to have substantial success in bringing key internal documents to light. In addition, lawyers at the workshop noted

that even grand juries convened by a district attorney could potentially result in significant document discovery.

> *Tobacco started with a small box of documents. We used that to wedge open a large pattern of discovery…It looks like where you are with climate is as good as it was with tobacco—probably even better. I think this is a very exciting possibility.*
>
> *– Stanton Glantz*

Jasper Teulings, general counsel for Greenpeace International based in the Netherlands, emphasized that the release of incriminating internal documents from the fossil-fuel industry would not only be relevant to American policy but could have widespread international implications.

Importance of Choosing Plaintiffs, Defendants and Legal Remedies

Matt Pawa, a leading litigator on climate-related issues, discussed his current case, *Kivalina v. ExxonMobil Corporation, et al.,* now pending on appeal. The lawsuit, brought under public nuisance law, seeks monetary damages from the energy industry for the destruction of the native village of Kivalina, Alaska by flooding caused by the decline of protective sea ice due to anthropogenic climate change. The case cites damage estimates made by the U.S. Army Corps of Engineers and the U.S. Government Accountability Office of between $95 million to $400 million [REF].

The suit was dismissed by the U.S district court in 2009 on the grounds that regulating greenhouse emissions was a political rather than a legal issue that needed to be resolved by Congress and the Administration rather than by courts. An appeal was filed with the Ninth Circuit Court of Appeals in November, 2009. In November, 2011, lawyers for the plaintiffs and the defendants made arguments before an appeals panel

in San Francisco. The panel of appeals judges has yet to rule on whether or not to reinstate the case.

Pawa noted that in representing Kivalina, he chose a plaintiff whose stake in the case is patently evident as is the harm that has come to the village. Because those facts remain largely beyond dispute, it puts the focus of the case squarely on attributing the damage to the defendants. In the case, Pawa explained, he has used the principle of "joint and several" liability which holds, as Pawa explained, that "If two guys are outside a bar and the plaintiff gets beaten up and only one technically does it, they are both held responsible." In this case, Pawa says, he will argue essentially that, because Exxon and the other corporate defendants in the case are indisputably large emitters of greenhouse gases, he will argue essentially that they "are basically like the two guys outside that bar." In addition, to help with his argument of causation, Pawa will also argue that Exxon and the other defendants distort the truth. He says his case seeks to pursue a remedy for some of those most vulnerable to the effects of climate change. Ultimately, Pawa says, however, he sees the Kivalina litigation as "a potentially powerful means to change corporate behavior."

Commented [sms2]: Matt: could you elaborate slightly on this here?

Jasper Teulings recounted a very different use of a carefully selected aggrieved party in a case where he helped representatives from Micronesia come to the Czech Republic where they requested a trans boundary agreement to prevent the Czech government from granting a 30-year permit extension for their coal-fired power plant. The action, he said, led to a national debate about global warming in a country led by a climate skeptic. Ultimately, the Czech environment minister resigned as a consequence of the legal action, only to be replaced by a power company executive. But in highlighting the threat posed to Micronesia by rising sea level, the action drew widespread public and media attention to the issue of climate change as the story was covered the international media, including the *Wall Street Journal*, *The Economist*, and *The Financial Times*.[10]

Participants weighed the merits of legal strategies that target major carbon emitters, such as utilities, versus those that target carbon producers such as coal, oil and natural gas companies. For public nuisance lawsuits, several lawyers at the workshop noted that emitters would be more likely targets of litigation because it is so much easier to establish that they are directly responsible for adding substantial amounts of carbon to the atmosphere. Attributing climate change to carbon producers under these kinds of lawsuits would likely be harder. Matt Pawa noted, for instance that the strategy is similar to that used by some plaintiffs trying to hold gun makers liable for violent acts—claims that the courts have generally rejected.

For lawsuits that target carbon producers, lawyers at the workshop agreed, plaintiffs would need to make evidence of conspiracy a more prominent part of their case. Richard Ayres, an experienced environmental attorney, noted that the Racketeer Influenced and Corrupt Organizations (RICO) Act, used effectively against the tobacco industry during the Clinton administration, could offer potential for bringing a lawsuit against carbon producers. As Ayres noted, "RICO has a nice quality of not requiring very much from a litigant." As he explained, the RICO statute requires that a claimant establish 'criminal enterprise,' and at least two acts of racketeering with at least one act having occurred within past four years. It is not even clear, he noted, whether a plaintiff has to show they were actually harmed by the actions. As Ayres put it, "RICO is not easy. It is certainly not a sure win. But such an action would effectively change the subject to: are the coal, gas, and oil companies liars?"

The issue of requesting an appropriate legal remedy was also discussed. As one of the workshop's lawyers put it, "as we think about litigation, we need to consider: What does our carbon system look like with climate stabilization? It has to be something positive. Only then can we figure out what strategies we need to pursue." As important as such a broad vision of remedy is, this participant also emphasized the advantage of asking courts to do things they are already comfortable doing, noting that, "even if your ultimate goal might be to shut down a company, you still might be wise to start out by asking for compensation for injured parties."

Other Potential Legal Strategies

False Advertising

Workshop participants discussed the strategy of pursuing false advertising claims. Naomi Oreskes brought up the example of the Western Fuels Association, an industry-sponsored front group that has run advertisements containing demonstrably false information. Oreskes noted that she has some of the public relations memos from the group and posed the question of whether a false advertising claim could be brought in such a case, especially if the group's intention was to prevent the United States from signing onto the Kyoto Protocol?

Lawyers at the workshop said that public relations documents could probably be used as evidence in such a case but they cautioned that courts view claims designed to influence consumer behavior differently than they do those designed to influence policy. They noted that the legal case involving consumer-oriented claims would be more straightforward because First Amendment rights can apply in matters of policy.

With regard to a false advertising claim, some lawyers at the workshop did note that, presuming the First Amendment hurdle could be overcome, historical claims could be deemed relevant if plaintiffs could show that the conduct has continued. In tobacco litigation, for example, plaintiffs have successfully gone back as far as four decades for evidence by establishing the existence of a continuing pattern by the tobacco industry.

Joe Mendelson, director of climate policy at the National Wildlife Federation, suggested that such a strategy might be employed to take on the coal industry's advertising campaign. He noted that the coal industry has run their advertisements in swing states where attorneys general will be especially loathe to take on their distortions. Such a legal case, he suggested, could be an example of a legal action that

might achieve a victory in terms of public education and engagement even if it lost in court.

Libel

Lawyers at the workshop also noted that libel lawsuits can be powerful. Michael Mann, for instance has worked with a lawyer, threatened libel lawsuits for some of the things written about him in the media and already won one such case in Canada. Libel cases, Matt Pawa explained, merely require claimants to establish falsity, recklessness, and harm. "What could be more harmful than impugning the integrity of a scientist's reputation?" Pawa asked. Roberta Walburn also noted that libel suits can also serve as a vehicle to get documents that might establish collusion between the fossil-fuel industry or its public relations operatives and selected media outlets.

Atmospheric Trust Litigation

Mary Christina Wood, professor of law at the University of Oregon, discussed her involvement with so-called Atmospheric Trust Litigation (ATL), a legal strategy that she pioneered now unfolding as a youth plaintiffs' action in all 50 states. The litigation is organized around the principle of returning the planet to a sustainable level of 350 parts per million of carbon dioxide in the atmosphere. The lawsuits will attempt to force massive reforestation and soil sequestration to reduce atmospheric carbon by invoking the internationally recognized Public Trust Doctrine.

Under this doctrine, a state or third-party corporation can be held liable for stealing from or damaging a resource—namely, the atmosphere—held as a public trust. The beneficiaries in the case are citizens—present and future—who will claim that the defendants—whether the state or federal government or third-party corporations—have a duty to protect and not damage the resource they oversee or bear some responsibility for.

Commented [sms3]: For Mary Wood: Is this accurate? If not, please clarify. Thanks!

Wood noted that the legal action has many promising features. It is brought by children, and can feature local impacts of climate change because it is being brought in every state. It is also flexible in that action can be brought against states, tribes, the federal government, or can seek natural resource damages from corporations. Wood said that while ATL lawsuits are just starting, some 22 amicus briefs have already been filed in which law professors from around the country argue that the approach is legally viable [REF].

Disagreement about the Risks of Litigation

Despite widespread endorsement by workshop participants of the potential value in pursuing legal strategies against the fossil-fuel industry, some of the lawyers present expressed concern about the risks entailed should the cases be lost. One noted, for instance, that it was important to consider that a lawsuit might not turn out as one might hope. As one participant put it, "we have very powerful laws and we need to think strategically about them so they won't be diminished by the establishment of a legal precedent or by drawing the attention of hostile legislators who might seek to undermine them."

Others, such as Sharon Eubanks, took issue with this perspective. As Eubanks stated, "If you have a statute, you should use it. We had the case where people said, 'what if you screw up RICO.' But no matter what the outcome, litigation can offer an opportunity to inform the public." Stanton Glantz concurred with this assessment. As he put it, "I can't think of any tobacco litigation that backfired; I can't think of a single case where litigation resulted in bad law being made."

4. Attribution of Impacts and Damages: Scientific and Legal Aspects

Several sessions at the workshop addressed a variety of vexing issues concerning the extent to which localized environmental impacts can be accurately attributed to global warming and how, in turn, global warming impacts might be attributed to specific carbon emitters or producers. Many challenges are involved in these kinds of linkages, from getting the science right to communicating effectively about the connections.

Myles Allen, a climate scientist at Oxford University, suggested that, while it is laudable to single out 400 villagers who live in Kivalina, Alaska, the fact is that all 7 billion inhabitants of the planet are victims of climate change. He noted, for instance, that while the UNFCC makes an inventory of emissions, it does not issue an inventory of who is being affected. As he put it, "Why should taxpayers pay for adaptation to climate change? That is a sound bite that I don't hear used. Why should taxpayers bear the risk? Perhaps that question alone can help shift public perception."

Allen noted that the scientific community has frequently been guilty of talking about the climate of the 22nd century rather than what's happening in this decade or now. As a result, he said, people too often tend to perceive climate change as a problem for our grandchildren.

Why should taxpayers pay for adaptation to climate change? That is a sound bite that I don't hear used. Why should taxpayers bear the risk? Perhaps that question alone can help shift public perception.

– Myles Allen

Challenges of Attributing Environmental Effects to Anthropogenic Climate Change

Several of the climate scientists at the meeting addressed the scientific challenges involved in attributing specific environmental effects to anthropogenic climate change. Climate change and natural variability combine to create weather and climate events which interact with population exposure and vulnerability factors in disasters that make

headlines. Myles Allen, for instance, noted that while scientists could accurately speak about increases in average global temperature, such large-scale temperature measurements are difficult to link to specific individuals.

Claudia Tebaldi, a climate scientist at Climate Central, emphasized the problem of confounding factors. She said that after having recently organized a workshop on the relationship between climate change and human health, she came away pessimistic. As she put it, "If you want to have statistically significant results about what has already happened, we are far from being able to say anything definitive because the signal is so often overwhelmed by noise."

Given that nearly all consequences have multiple causes leading up to them, Tebaldi reviewed the difficulties entailed in efforts at so-called *single-step attribution* (in which a single variable is added or removed from a model); *multi-step attribution* (in which two or more separate attribution linkages are drawn); and finally *associative patterns of attribution* such as efforts to compare the pattern on a map for changes that have occurred over time. She noted that the 2007 report of the Intergovernmental Panel on Climate Change was relatively comfortable attributing to climate change environmental impacts including: changing snow/ice/frozen ground; warmer temperatures increasing runoff and anticipated snowmelt in spring; effects on terrestrial biological systems; rising water temperatures changing in salinity, oxygen levels, and ocean acidification. But, she said, it is still hard to say anything statistically significant about key areas of concern including: agricultural production, food prices, food security, human health, extreme weather events (such as tornadoes, hurricanes, or floods), or small islands' particular vulnerabilities [REF].

Climate scientist Mike MacCracken expressed more optimism about the ability of scientists to identify patterns of changes.. As he put it, "if you are trying to attribute a single weather event to climate change, you might as well be trying to prove the cause of a single case of cancer." MacCracken argued, however, that accumulative change is far easier to prove, such as recognizing species' geographical shifts as a pattern. As he

noted, "If you ask: have these events occurred in the timescale of people's lives, the answer is: Yes." Myles Allen agreed that scientists could be far more confident about a group of things rather than a single event, but noted that "then you are talking again about climate [as opposed to weather]. We can say with confidence how the risks are changing. Absolutely. And some harms can be caused by change in risk. But we are still talking about probabilities." As an example, Allen cited work by Rahmstorf & Coumou, that found an 80 percent probability that the 2010 July heat record would not have occurred without climate warming .[11]

A Russian heat wave is a single event. If you are going to court on the science of that, you might as well be trying to prove the origin of a single case of cancer. Cumulative change is easier to prove. Species shifts as a pattern. If you talk about the timescale of people's lives and ask: "have these events occurred?" The answer is: "Yes."

—Michael MacCracken

Others agreed that many different types of aggregate findings can be useful. Paul Slovic, for instance, cited the example of the book *At War with the Weather* by Howard Kunreuther. In studying economic losses from natural disasters, Kunreuther found an exponential increase in losses incurred over the last 10 or 20 years.[12] Again, multiple factors need to be teased apart such as the growth in population exposed to natural disasters, increased infrastructure replacement costs, as well as natural variability and climate change influence.[13]

MacCracken suggested that issues of the science itself were distinct from how findings are communicated to the public. "The challenge," he said, "is finding an effective lexicon that scientists are comfortable with." Along these lines, one participant suggested that it could be helpful to communicate findings framed as a discussion. For example, a farmer could ask a question saying, "I'm concerned because I'm seeing *this* [particular local weather event]." The scientist can comfortably respond: "You're right to

be concerned because we are seeing *this, this,* and *this* [aggregate effect or strong probability of anthropogenic warming]."

Lew Branscomb, a physicist, governmental policy expert and one of the meeting's organizers, suggested that the evolution of the science is an important issue. As he put it, "Absolutely crucial is real progress on regional and local consequences on climate change. We have general notions that the Southwest will be drier. But, once the science is able to say with confidence what will happen in the states of Colorado and Arizona, then the people who live there will want to pressure their representatives to fix their problem. Then political people will be much more responsive to the issue. That will be real progress in next few years."

Scientific progress on regional and local consequences on climate change is crucial. We have general notions that the Southwest will be drier. But, once the science is able to say with confidence what will happen in the states of Colorado and Arizona, then the people who live there will want to pressure their representatives to fix their problem. Then political people will be much more responsive to the issue. That will be real progress in next few years.

—Lew Branscomb

Determining Appropriate Standards of Evidence

An interesting discussion arose at the workshop about the appropriate standard of evidence required when attributing specific environmental impacts to global warming and establishing the culpability of carbon emitters and producers. Naomi Oreskes noted the important differences among standards of evidence in science, standards of evidence in law, and standards of evidence in public perception.

As Oreskes put it, "When we take these things to the public, I think we often make a category error. We take a standard of evidence applied internally to science and

use it externally. That's part of why it is so hard to communicate to public." Oreskes pointed out that the "95% proof rule" widely accepted among scientists might not be appropriate in this application. That standard of proof, she said, "is not the 11th commandment. There is nothing in nature that taught us that 95% is needed. That is a social convention. Statistics are often used when we don't understand the mechanisms of causation. But what if we do know what the mechanisms are? For instance, if we know how a bullet kills a human, we don't need statistics to prove that bullets can kill."

Oreskes went on to note that, as a historian of science, it struck her that scientific knowledge in the field of climate science was very robust. More abundant and more robust than many other fields such as plate tectonics or relativity. The observation led her to wonder why climate scientists have been so reticent about communicating their results and to postulate that, in accepting such a high standard of proof, "the scientific community has been influenced by push back from industry."

Cardiologist and director of the Legacy Tobacco Document collection Stanton Glantz drew a comparison to his work with the Centers for Disease Control to establish a link between smoking and breast cancer. As he noted: "I fought CDC on the links between smoking and breast cancer. There were 17 studies. How could you make a statement that there was no link? The epidemiologists focus on statistics but we already knew about the biology of breast cancer and damage to DNA and links to tobacco. My argument was that you needed to look at a whole body of evidence." For climate change, Glantz said, all the pieces fit together and they are consistent. "We compared the breast cancer evidence, which is stronger than the original lung cancer evidence, and that got accepted and became the default position. But the fact is, not everyone who smokes gets cancer." Glantz added that criminal trials use the standard of "beyond a reasonable doubt." But, as he put it, "Scientists have been making the 'reasonable doubt' standard higher and higher."

Some of the scientists at the workshop, however, took issue with the idea that they ought to apply different standards of proof to their work. Claudia Tebaldi, for

instance, stated: "As a scientist I need to have two different standards? I don't see that. I am not convinced that I should lower my standards of skepticism when I talk to the public. As a scientist I give you the probability. It is not my job to change my paper if the consequences are so bad. That is the job of a policy maker working with my results."

Mary Christina Wood reminded the group that the medical profession is adept at juggling two very different standards: the standard of proof and the standard of care and suggested that climate scientists might be able to do something similar. Dick Ayres agreed, emphasizing that, as he put it, "too high a standard of proof increases the burden on those who seek to protect public health."

Myles Allen noted that a key problem always comes back to the issue of doubt. "If you grab a scientist off the street and ask whether we *could* have had this weather event without global warming, they will likely says yes, it could have been possible. So the reality is that there will always be a scientist available to fill that role in the court of law." The vexing thing, Allen said, is "trying to make clear to the public that there are two uncertainties. We can be very certain about what is happening and yet very uncertain about what is going to happen tomorrow or next year."

Attribution of Environmental Damage to Carbon Producers

Richard Heede presented a preview of a research project, several years in the making, in which he has been quantifying the annual and cumulative historic emissions attributable to each of the world's major carbon producers. By closely reviewing company annual reports and other public sources in the energy sector, Heede is working to derive what portion of the planet's atmospheric carbon load is due to the fossil fuels each of these companies has unearthed. The research effort is still awaiting peer review before it can be finalized and publicized.

Commented [sms4]: Rick: If you are willing to add more detail about your work, I think that would be great and it would fit easily here.

Most all the workshop's participants responded positively to Heede's research. Matt Pawa said that he thought the information could prove quite useful in tort cases, helping to establish joint and several liability. Pawa cautioned that, in practice, a judge

would likely hesitate to exert joint and several liability against a carbon-producing company when the lion's share of carbon dioxide in the atmosphere could ultimately *not* be attributed to them specifically. But, in the end, he said this kind of an accounting would no doubt inspire more litigation that could have a powerful effect in beginning to change corporate behavior.

Other participants reacted positively to other aspects of Heede's research. Angela Anderson, director of the climate and energy program at the Union of Concerned Scientists, noted for instance that it could potentially be useful as part of a coordinated campaign to identify key climate "wrongdoers." Mary Christina Wood agreed saying the preliminary data resonated strongly with her, making her feel like "Polluters did this and they need to clean this up." Other participants noted that it could be helpful in the international realm by changing the narrative that currently holds nations solely responsible for the carbon emitted by individuals within their own borders. Finding specific companies responsible, they said, cuts a notably different way.

One concern raised was that some in the "American middle" might perceive it as unfair to go after a company that didn't know carbon dioxide was harmful for much of the extended period Heede reviewed. To get a sense of this, some suggested reaching out in particular to someone such as public opinion specialist Tony Leiserowitz to undertake polling to see how such research might be received by different segments of the public.

Robert Proctor suggested that the most effective public communication about the research would be to try to use the most simple formulation possible. Proctor noted that one effective strategy in the fight against tobacco was to equate a year's production of cigarettes in a particular factory to a number of deaths. With cigarettes, anti-tobacco activists determined that there was one death from smoking for every one million cigarettes produced. Given that the industry made roughly one cent in profit per cigarette, that meant that a company such as Phillip Morris was making $10,000 in profit for every death their products caused [REF]. Proctor suggested that a similar

strategy could be adapted to link the largest corporate carbon producers to specific climate change impacts. If numbers could be developed for how many deaths per year were caused by each degree rise in global temperature, for instance, a similar case could be made against a particular company that produced or emitted a known percentage of the carbon load contributing to global warming.

Picking up on Proctor's notion, Naomi Oreskes suggested that the attribution could link some portion of sea level rise to the emissions caused by a single carbon producing company. In essence, she suggested, "you might be able to say: 'here's Exxon's contribution to what's happening to Key West or Venice." Myles Allen agreed in principle but said the calculations required, while not complicated, were quite easy to get wrong.

Whether or not the attribution would hold up in court, Stanton Glantz expressed some enthusiasm about such a strategy, based on his experience with tobacco litigation. As he put it, "I would be surprised if the industry chose to attack the calculation that one foot of flooding in Key West could be attributed to ExxonMobil. They will not want to argue that you are wrong and they are really only responsible for one half foot. That is not an argument they want to have." For similar reasons, he said, tobacco companies have never challenged death estimates, noting "Their PR people tell them not to do that, focusing instead on more general denial and other tactics."

Evidence of Collusion and Prospects for Constructive Engagement

Participants at the workshop also discussed one other aspect of attribution, namely the research bringing to light the close connections among climate deniers, the fossil-fuel industry, and even the tobacco companies. John Mashey presented a brief overview of some of his research, which traces funding, personnel and messaging connections between some 600 individuals and roughly 100 organizations in the climate denial camp.[14] Mashey noted that looking closely at the relationships between these parties—via documents, meetings, emails, and other sources—can ultimately help to build the

clearer picture of the extent of collusion involved in the industry's campaign to sow confusion on the issue. Mashey cited, for instance, memos that have surfaced from a 1998 "climate denial" plan that involved most of the major oil companies under the auspices of the American Petroleum Institute that set the stage for much of the disinformation of the past 10 years.[15]

Ultimately, a number of participants agreed the various linkages and attribution data could help build a broad public narrative that might say: we have a serious problem established scientifically; we know the people responsible are the same ones responsible for a campaign of confusion; there are solutions, but we can't get to them because of the amount of confusion these companies have funded, stated, or published.

Finally, there was some fundamental disagreement over the potential for engagement with industry. As Richard Heede noted, "I would love to envision constructive engagement with [the fossil-fuel] industry. That would mean convincing them to participate in a plan that "could make life worth living for future generations." Some veterans of the campaigns for tobacco control voiced skepticism, however. Stan Glantz recalled two instances in which tobacco control activists sought engagement with the industry. In one of them, he said, the National Cancer Institute met with tobacco companies to try to work with them to make less dangerous cigarettes. As Glantz recalled, "The tobacco companies used it as an opportunity to undertake intelligence gathering about health groups and it was a disaster" [REF]. Glantz did note a fundamental difference between the cases of tobacco and climate change, however. As he put it, while tobacco companies offer no useful product, "the fact is we do need some form of energy. Unless other alternative energy firms replace the current carbon producers, which seems unlikely, at some point there will likely have to be some kind of positive engagement. Less clear, however, is how best to create a political environment for that engagement to work."

5. Public Opinion and Climate Accountability

Throughout several sessions, workshop participants discussed and debated the role of public opinion in both tobacco and climate accountability. It was widely agreed that, in the case of tobacco control, a turning point in public perception came at the so-called "Waxman Hearings" on the regulation of tobacco products held in 1994.[16] On this highly publicized occasion, a broad swath of the populace became aware that the heads of the major tobacco companies had lied to Congress and to the American public. As Naomi Oreskes put it, her reading of tobacco history is that tobacco litigation helped make this public narrative possible.

The watershed moment was the Congressional hearing when the tobacco companies lied and the public knew it. If that had occurred earlier, the public might not have so clearly recognized that the executives were lying. My question is: what do we know about how the public opinion changed over time?

--Peter Frumhoff

Participants grappled with the question of how climate advocates might possibly create any kind of similar narrative for global warming. While there was a good deal of debate about exactly what such a narrative should be, there was widespread agreement in the group that the public is unlikely to be spurred into action to combat global warming on the basis of scientific evidence alone. Furthermore, climate change science is so complex that climate skeptics within the scientific community can create doubts in the public mind without any linkage to the fossil fuel industry or other climate deniers.

The Importance of Creating a Public Narrative

Jim Hoggan, a public relations expert and co-founder of desmogblog.com, explained the problem this way: "Most people are disconnected from society, not just climate change…Communication is more complicated than just being better explainers. People have barriers to listening." Hoggan emphasized the importance of linking the notion of the industry's "unjust misinformation" back to an overall narrative about sustainability rather than getting mired over issues of whose fault climate change is and who should do what to ameliorate the situation. Noting the fact that there is broad and deep support for clean energy, Hoggan suggested the following narrative: "Coal, oil and gas companies are engaging in a fraudulent attempt to stop the development of clean energy."

Many participants voiced agreement about the importance of framing a compelling public narrative. Dick Ayres added that naming an issue or campaign can be important as well. After acid rain legislation passed in 1990, he recalled, an industry lobbyist told him: "you won this fight 10 years ago when you chose to use the words 'acid rain.'"

Here is one possibility for a public narrative: "Coal, oil and gas companies are engaging in a fraudulent attempt to stop the development of clean energy."

--Jim Hoggan

Paul Slovic, a psychologist and expert on risk perception, cited his colleague Daniel Kahneman's work, which has shown that people often tend to make fast judgments rather than stopping to analyze.[17] While slow thinking is necessary to comprehend climate change, he said, people tend to be lazy and go with their first impressions. Slovic noted that his review of two cases of documents from tobacco marketers in the Justice Department's RICO case against the tobacco companies

convinced him that the tobacco industry was decades ahead of academic psychologists in understanding this interplay between emotion and reason in decision making. The sophistication of their approach showed, he said, in the effectiveness of cigarette makers' shift was toward images of beautiful people doing exciting things, or using words like "natural" or "light" that convey health as a response to mounting evidence of smoking's link to lung cancer.

Slovic emphasized that there are huge differences between tobacco and climate risks. As he noted "Every hazard is unique, with their own personalities, so to speak. Do they pose a risk to future generations? Do they evoke feelings of dread? Those differences can make an impact on strategy." The feeling of dread is an important feature in people's perception of tobacco risks. The fact that smoking was equated with

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Every hazard is unique. They have their own personalities, so to speak. Do they pose risk to future generations? Do they evoke feelings of dread? There are huge differences between tobacco and climate risks. Those differences can make an impact on strategy.

—Paul Slovic

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lung cancer, he said, created a very powerful feeling of dread. It differs from "doom and gloom" discussions about climate change which can tend to turn people off rather than instilling dread. The difference is that climate change risks seem diffuse—distant in time and location. The situation becomes even more complicated, Slovic explained, because when people get a benefit from an activity, they are more inclined to think the risk is low. If they get little benefit, they tend to think the risk is higher. As he emphasized, "The activities that contribute to climate change are highly beneficial to us. We love them; we are addicted to them." That, he said makes the problem of communicating the dangers of climate change all the more difficult.

Reaching People 'Where They Live'

Several participants emphasized the phenomenon of cultural cognition, including the work on the subject by Dan Kahan at Yale Law School [REF]. Cultural cognition research suggests that we all carry around us a vision of a social world in which we live. Kahan's work identifies major divisions between those who tend toward worldviews emphasizing structure and hierarchy versus those who tend toward a vision of egalitarianism. Another axis is individualism vs. communitarianism (i.e. those who place a higher value on the welfare of group than the individual). In Kahan's conception, all of us have a blend of such attributes. Attitudes on climate change are highly correlated with these views. As a result, one of the reasons it is so difficult to change people's views on issues like climate is that, when people receive information, they tend to spin it to reflect their favored worldview. In light of this research, several participants expressed concern that a revelation about documents from oil companies might not work to change many minds, given the power of such pre-existing worldviews.

Brenda Ekwurzel, a climate scientist at the Union of Concerned Scientists (UCS), recounted her organization's experience with this variable in her work on climate change. Ekwurzel explained that UCS, as a science-based organization, contends with an "information fire hose" about climate change. As she put it, "We love data. We scientists tend to focus on the frontal lobe and we need communications folks to remind us that there are other parts of our brain too." Ekwurzel explained that she always wants to say "let's talk about climate change." But that, it turns out, is not necessarily best starting point. She said she has learned that a better place to start turns out to be: "Let's talk about what you care about most" where the answer is likely to be: family and friends, concerns about their livelihoods, their health, or recreation.

Ekwurzel highlighted the fact that polling shows that among people in Kahan's egalitarian/communitarian sector, some 77 percent believe that experts agree about climate change while, among those in the hierarchical/individualist camp, the situation is reversed with some 80 percent believing that experts *disagree* about climate change

[REF]. To overcome the barrier, those working on communicating about climate change at UCS began experimenting. She recounted one example in which they decided to address an issue of great concern to a particular constituency: Texas high school football—in particular growing concern about a correlation between August football practices and an increase in heat stroke among the student athletes.

Commented [sms5]: Brenda: Do you have a citation for this?

The effort to engage on this issue, launched in Texas and Oklahoma to coincide with the first week of football practice, proved remarkably successful, she said, drawing local media attention in a region the organization rarely reached. The effort also allowed for commentary from a different set of influential voices than those who normally talk about global warming-related issues, such as medical professionals. Perhaps a coincidence, but within six weeks of this campaign, the state of Texas decided to scale back high school football practices in the summer—and the message about a consequence of warmer summers in the region successfully reached a largely untapped audience for UCS.[18]

The Question of Identifying a Wrongdoer

Participants at the workshop also discussed the benefits and risks associated with identifying a wrongdoer as part of a public narrative. Some participants, such as Paul Slovic, argued that the technique could prove an effective strategy. Slovic cited research by Roy Baumeister suggesting that, when it comes to messages, "bad is stronger than good," a finding that helps explain the tendency toward negative advertising in political campaigning.[19] Claudia Tebaldi, a climate scientist with Climate Central, said she believed "there is a big difference between convincing people there is a problem and mobilizing them. To mobilize, people often need to be outraged for them to act."

On the other hand, several of the public opinion experts cautioned that "argument tends to trigger counter argument." By contrast, they pointed out, emotional messages don't tend to trigger counter emotions. As public opinion expert Dan

Yankelovich put it: "Abuse breeds abuse. In this case, you have industry being abusive. But you do not want to demonize the industry. The objective ought to be to have the public take this issue so seriously that people change their behavior and pressure industry to alter their current practices. In the end, we want industry to be more receptive to this pressure, not less."

For this reason and others, several participants expressed reservations about implementing an overly litigious strategy at this political moment. Perhaps the major proponent of this view was Dan Yankelovich, who explained: "I am concerned about so much emphasis on legal strategies. The point of departure is a confused, conflicted, inattentive public. Are legal strategies the most effective strategies? I believe they are important *after* the public agrees how to feel. Then you can sew it up legally." In the face of a confused, conflicted, and inattentive public, Yankelovich argued, legal strategies can be a double-edged sword because, as he put it: "The more adversarial the discourse, the more minds are going to be closed."

I am concerned about so much emphasis on legal strategies. The point of departure is a confused, conflicted, inattentive public. I believe legal strategies are important after the public agrees how to feel about an issue. Then you can sew it up legally. Legal strategies themselves are a double-edged sword. The more adversarial the discourse, the more minds are going to be closed.

—Daniel Yankelovich

Jim Hoggan phrased his advice on the subject this way: "It's like that old adage that says: 'Never get into a fight with a pig in public. The pig likes it. You both get dirty. And, after a while, people can't tell the difference.'"

Dan Yankelovich explained his theory that public opinion moves through three recognizable phases on issues like smoking or climate change that he described as "a public learning curve." The first stage is a "consciousness-raising" phase during which the media can help dramatically to draw attention to an issue. This is followed by a second "working through" stage during which things bog down as the public struggles over how to adapt to painful, difficult change. Yankelovich noted a paucity of institutions to help public work through this phase, which is frequently marked by the kind of denial and wishful thinking, recognizable today in public opinion about climate change. He argued that only when the public begins to move into the third phase of "thoughtful public judgment" can legal strategies prove most effective and ultimately become codified into laws and regulations.

As Yankelovich explained, "My sense is we are not there yet on climate change. The media has not been a help. The opposition has been successful in throwing sand in the works. People are just beginning to enter the open-minded stage. We are not decades away but I don't have enough empirical data. My sense is that it may take about three to five more years."

The Prospect of a 'Dialogic' Approach and a Positive Vision

Given the fact that the climate advocacy community has not yet seemed to coalesce around a compelling public narrative, Yankelovich suggested that the topic could be a good candidate for engaging in a relatively new public opinion technique known as the "dialogic method" that works with representative groups holding different views on a subject over the course of a full day or more to develop a narrative in an iterative fashion [REF]. The benefit of the method, he suggested, is that climate advocates could essentially work in partnership with the public "by having them help shape a narrative that is compelling." Yankelovich argued that narrative must convey deep emotion to cut through the apathy and uncertainty that is prevalent in public opinion on the issue today, making it easier for the fossil-fuel industry to sow confusion. In considering the emotional components of the narrative, he noted that anger is

Commented [sms6]: Dan: Do you have a suggestion for a citation that could help people learn more about this? Thanks!

certainly likely to be one of the major candidates of emotion but there may be others as well, noting that "the notion of a custodial responsibility and concern also has deep resonance." Finding the right public narrative, Yankelovich suggested could help make progress in accelerating through this second phase within the next 5 years.

In one interesting example of mobilizing public opinion on an issue, Mary Christina Wood drew the attention of the group to the so-called "victory speakers" campaign in World War II. During the political moment when the U.S. was contemplating entering the war, the threat of Nazi Germany seemed far away to many Americans and many people were reluctant to change their lives to mobilize for war. In response, the U.S. government orchestrated a campaign in which some 100,000 victory speakers, including Wood's mother and grandmother, made five speeches each day about the need for U.S. involvement.[20] Wood suggested that the campaign helped mobilize the American people remarkably quickly.

Finally, amidst much discussion of issues of accountability, liability, and disinformation, several participants voiced strong support for the need to create a positive vision as part of a public narrative about climate change.

As Naomi Oreskes put it, citing Nordhaus and Schellenberger [REF], "Martin Luther King did not say I have a nightmare! King looked at a nightmare but he painted a positive vision. Abolitionists did not say we have to collapse the economy of south even if that is what happened. No one wants to hear you are a bad person or that the way you live is bad. Lew Branscomb concurred, noting that: "There has got to be a future people think is worth struggling for."

Commented [sms7]: Naomi: Do you have the citation for this? Thanks!

6. Conclusion

Workshop participants unanimously agreed that the sessions yielded a remarkably productive and well-timed interdisciplinary dialogue. Participants from the scientific and legal communities seemed especially appreciative for the opportunity to engage so intensively with colleagues outside of their usual professional circles. The only potential gaps identified in the meeting's assemblage were suggestions to try to include participants from the insurance industry and to perhaps include more emphasis on the biotic effects of climate change.

Commitments were made to continue the discussion and collaborate in a variety of ways on a number of the efforts discussed at the meeting. In particular, several participants agreed to work together to help further some of the attribution work now underway, including efforts to help publicize and build an advocacy component linked to it that can help make attribution findings easy to understand for the general public. An informal subgroup was proposed to pursue Dan Yankelovich's suggestion to use the dialogic method in conjunction with public relations specialists to help develop an effective public narrative.

Commitments were also made between participants to try to coordinate efforts and continue discussion about strategies for gaining access to internal documents from the fossil-fuel industry and its affiliated climate-denial network as well as to work toward building an accessible repository for the documents that are obtained.

Points of Agreement

There was widespread agreement among workshop participants that multiple, complementary strategies will be needed moving forward. For instance, in a theme that emerged repeatedly over the course of the sessions about what the "cancer" of global warming might be, there was a general acceptance of the proposition put forth by Angela Anderson that the answer might differ by region, with issues of sea-level rise instilling the most concern on the coasts, and concerns about extreme heat proving

most compelling in the Midwest. There was also widespread agreement that it is desirable to focus on consequences of climate changes happening now rather than projecting impacts in the distant future. Brenda Ekwurzel's example of the public engagement over the issue of Texas football was offered as an example of the power of highlighting such immediate consequences.

Equally important, there seemed to be nearly unanimous agreement that there was an important role for legal actions, both to wrest potentially useful internal documents from the fossil-fuel industry and, more broadly, to maintain pressure on the industry in the hope of building support for legislative and regulatory responses to address carbon emissions and combat continued global warming. Some participants particularly emphasized that the pressure from the courts offered the best current hope for gaining the cooperation of the energy industry to engage in conversion to renewable energy sources.

Dan Yankelovich expressed a widely held sentiment when he noted what he called "a process of convergence" in which participants with different expertise incorporated broader perspectives on the problem at hand over the course of the workshop. Personally, he said, "I know I found the tobacco example and the range of possible legal strategies very instructive."

Unresolved Issues

Perhaps the largest unresolved issues from the workshop involved some disagreement over how adversarial in tone efforts addressed to the fossil-fuel industry ought to be, and the extent to which inspiring outrage is the best way to mobilize the public.

On the latter point, a number of participants favored strategies that attempt to foster public outrage. As one participant noted, for instance: "Outrage is hugely important to generate. Language that holds carbon producers accountable should be a an important part of the narrative we create." While the notion of inspiring public

outrage was not widely disputed, a number of participants expressed reservations about any plans that "demonized" the fossil-fuel industry.

Myles Allen, for instance, worried that too adversarial a tone "could hand a victory to the 'merchants of doubt." As Allen noted, "The biggest losers are those subject to the disinformation. That entire portion of the political spectrum has been effectively muted. This is the real loser. Our focus ought to be to bring as many of these people back to the table and motivate them to act. We need to somehow promote a debate among different parts of legislature to get this happening."

Lew Branscomb agreed that efforts should not seek to demonize the fossil-fuel industry, noting that "there are a lot of companies in the oil and auto business and some of the companies will come forward on the good side. We all need their cooperation. My notion is to try to find people in the industry producing carbon who will come around." To accomplish this, Branscomb suggested a strategy that features facts and doesn't impugn motives.

Brenda Ekwurzel lent some historical support to such a view by citing an account from Adam Hochschild's book *Bury the Chains,* about the long road to end slavery. Hochschild noted, she said, that one of the most influential pamphlets published in the abolitionist fight offered a dispassionate accounting of facts and details about the slave trade gathered from witnesses who had participated in it. Notably, this publication had no trace of moral finger wagging that had marked virtually all prior pamphlets. Instead, the facts ruled – especially a famous diagram of a slave ship – and became widely accepted. Women in the UK , for instance, soon started serving tea using only sugar that had been certified as not having come from the slave trade.[21] "Maybe," Ekwurzel suggested, "we need an analogous effort to offer certified energy sources from suppliers who do not spread disinformation."

Mike MacCracken supported the need to "win the middle." As he noted, "We have had international consensus of scientists agreeing to key facts since 1990." While MacCracken said he thought the idea of trying to win money for the victims of climate

change could be an effective strategy, he added that "the trouble is, everyone is a victim." When something affects everyone, MacCracken said, it is a political matter not a legal matter.

Angela Anderson said she hoped the Union of Concerned Scientists (UCS) could contribute meaningfully to the public's "working through" stage of the process outlined by Dan Yankelovich. She noted that local adaptation stories offer a way to sidestep the controversy. But she acknowledged that it is still an open question whether this strategy helps people to work through the issue and ultimately accept Climate Science as fact? "This is our theory," she said, "But we don't have the research yet to prove this." Anderson said that many people expect UCS, as a science-based organization, to correct misinformation about climate science. "I don't want to abdicate that responsibility," she said, "and I wrestle with this, wondering what is the most effective order in which to do things and the right tone?"

While many questions like these remain unresolved, the workshop made an important contribution in the quest for answers. And many glimmers of an emerging consensus can be seen in a strategy that incorporates legal action for document procurement and accountability, and building a narrative that helps create some kind of public outrage, not for the purpose of demonizing industry, but illuminating collusion and fraudulent activity that prevents us from building the sustainable future we need and our children deserve.

Acknowledgments

The workshop was conceived by **Naomi Oreskes**, of the University of California, San Diego, **Peter C. Frumhoff** and **Angela Ledford Anderson,** of the Union of Concerned Scientists, **Richard Heede,** of Climate Mitigation Services, and **Lewis M. Branscomb**, of the John F. Kennedy School of Government, Harvard University.

This workshop was made possible by the V. Kann Rasmussen Foundation, the Mertz Gilmore Foundation, the Grantham Foundation for the Protection of the Environment, and the Martin Johnson House at Scripps Institution of Oceanography in La Jolla, CA. Without their generous support, this workshop would not have been possible.

Endnotes

[1] Terry, Luther et al. 1964. *Smoking and Health: Report of the Advisory Committee to the Surgeon General of the United States.* U-23 Department of Health, Education, and Welfare. Public Health Service Publication No. 1103. Online at: http://profiles.nlm.nih.gov/ps/retrieve/ResourceMetadata/NNBBMQ.

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[5] U.S. Department of Health and Human Services. 2010. "Medicare National Coverage Determinations." Online at: http://www.cms.gov/Regulations-and-Guidance/Guidance/Transmittals/downloads/R126NCD.pdf. See also: U.S. Centers for Disease Control and Prevention.2011. "Targeting the Nation's Leading Killer." Online at: http://www.cdc gov/chronicdisease/resources/publications/aag/osh.htm.

[6] *State of Minnesota and Blue Cross Blue Shield v. Philip Morris et al.* Summary judgment. 1998. Online at: http://publichealthlawcenter.org/topics/tobacco-control/tobacco-control-litigation/minnesota-litigation-and-settlement.

[7] See, for instance, Brandt, Allan M. 2007. *The Cigarette Century: The rise, fall, and deadly persistence of the product that defined America*. New York: Basic Books.

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[11] Rahmstorf, Stefan, & Coumou, Dim. 2011. "Increase of extreme events in a warming world." *PNAS.* 24 Oct. 2011. See also: Coumou, Dim, & Rahmstorf, Stefan. 2012. "A Decade of Weather Extremes," *Nature Climate Change*, 25 Mar 2012.

[12] Kunreuther, Howard, and Michel-Kerjan, Erwann. 2009. *At War with the Weather Managing Large-Scale Risks in a New Era of Catastrophes*. Cambridge: MIT Press.

[13] Intergovernmental Panel on Climate Change. 2012. "Managing the Risks of Extreme Events and Disasters to Advance Climate Change Adaptation: A Special Report of Working Groups I and II of the Intergovernmental Panel on Climate Change." [Field, C.B., V. Barros, T.F. Stocker, D. Qin, D.J. Dokken, K.L. Ebi, M.D. Mastrandrea, K.J. Mach, G.-K. Plattner, S.K. Allen, M. Tignor, and P.M. Midgley (eds.)]. Cambridge, UK: Cambridge University Press.

[14] See for instance, Mashey, John R. "Crescendo to Climate gate Cacophony: Behind the 2006 Wegman Report and Two Decades of Climate Anti-Science," available at: www.desmogblog.com/crescendo-climategate-cacophony.

[15] See American Petroleum Institute, April 1998. "Global Climate Science Communication Plan." Online at: http://www.euronet.nl/users/e_wesker/ew@shell/API-prop.html.

[16] Hearing of the U.S. House Energy and Commerce Committee, Subcommittee on Health and the Environment, April 14, 1994.

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[18] Union of Concerned Scientists. Media alert. 2012. "States Work to Protect High School Football Players from Extreme Heat Risk, the Leading Cause of Death and Disability among High School Athletes." Online at: http://www.ucsusa.org/news/media_alerts/states-work-to-protect-high-school-football-1374.html.

[19] Baumeister, Roy F., and Bushman, Brad J. 2013. *Social Psychology and Human Nature*. Wadsworth Publishing Co.

[20] See, for example, U.S. Office of War Information. 1942. "Victory Speaker: An Arsenal of Information for Speakers." Online at: http://arcweb.sos.state.or.us/pages/exhibits/ww2/life/pdf/speak1.pdf.

[21] Adam Hochschild, *Bury the Chains,* New York: Houghton Mifflin Company, 2006, pp.194-5.

From: **Mary Wood** mwood@uoregon.edu
Subject: Re: Essential info for June 14-15 workshop
Date: June 4, 2012 at 2:59 PM
To: Alison Kruger [redacted]

MW

hi Alison - thanks so much. And as to the one slide, I'll just bring it on a key and can give it to you just before the presentation. It would not be disastrous at all if something failed - I'd just go without. I'm under lots of deadlines this week and won't make the June 8. Thanks!

Mary Christina Wood
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On Jun 4, 2012, at 2:47 PM, Alison Kruger wrote:

> Hi Mary:
>
> Yes absolutely please still plan on preparing a presentation for Session 4, addressing: *what international legal strategies have potential for altering the climate debate in the US?*
>
> In terms of any slides or visual aids you may have: to guarantee that we have them, send by COB Friday, June 8. If you will not have them ready by June 8, do still let me know whether you plan to have them so we make sure to coordinate in advance of your presentation.
>
> Will look forward to receiving more information from Isla.
>
> Best,
> Alison
>
> ---
>
> **From:** Mary Wood [mailto:mwood@uoregon.edu]
> **Sent:** Monday, June 04, 2012 5:43 PM
> **To:** Alison Kruger
> **Subject:** Re: Essential info for June 14-15 workshop
>
> Hi Alison - My assistant is attending to these requests. I wanted to know if you still want me to give a 7 min. presentation on legal options internationally? I'm planning on it unless you tell me otherwise. Thanks. MW
>
> Mary Christina Wood
> Philip H. Knight Professor
> Faculty Director, Environmental and
> Natural Resources Law Program
> University of Oregon School of Law
> 1515 Agate St.
> Eugene, OR 97403-1221
> (541) 346-3842

mwood@law.uoregon.edu

On Jun 4, 2012, at 11:08 AM, Alison Kruger wrote:

Dear Professor Wood:

I'm writing with a few final questions and essential information for the workshop.

Please confirm receipt of this message and reply with requested information by Friday, June 8.

Requests – send information prior to COB Friday, June 8

- Send a photo and bio of 100-300 words, or link to preferred online bio.
- We are planning on your attendance at dinner on Thursday – let me know if this is not the case.
- We are expecting you at dinner Friday night. Friday night, spouses are welcome to join and contribute the cost of their meal.
- Optional slides/visual aids for your presentation: to guarantee that we have them, send by COB Friday, June 8. If you will not have them ready by June 8, do still let me know whether you plan to have them so we make sure to coordinate in advance of your presentation.
- We invite your recommendations for key papers on topics related to the subject of the meeting, to make available to others attending.

Useful information

1) Note on confidentiality - attached
2) You are confirmed for three nights at the La Jolla Shores Hotel, arriving Wednesday and departing Saturday.
3) For any ground transportation, save your receipts! Our finance office cannot reimburse you without them.
4) To get from the San Diego airport to the hotel, I recommend you book through Super Shuttle – and again, save the receipt:
    a. From airport to hotel – you can enter "La Jolla Shores Hotel" as the destination
    b. Company: **UCSUSA**
    c. Discount Code: **UCSUS**
5) Detailed meeting agenda and participant list - attached
6) Invitation to Wednesday evening event: http://labsofdemocracy.eventbrite.com/

Do be in touch with any questions. We are looking forward to a fascinating two days in La Jolla!

Alison

Alison Kruger
Union of Concerned Scientists
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Direct: 617 301 8088

Founded in 1969, the Union of Concerned Scientists is an independent, science-based nonprofit working for a healthy environment and a safer world.

<Note on confidentiality June 14-15 2012.docx><Climate Accountability Workshop draft agenda_June_2012.docx><Participants - Climate Accountability workshop June 14-15.docx>

Note on confidentiality

June 14-15, 2012

Some participants may wish to have their participation in this workshop and/or some information that they present to be treated as confidential.

Toward that end, we request that workshop participants:

- withhold public mention of the workshop discussions until the final session has adjourned;
- identify any information they discuss that they would like to be treated as confidential and which is not to be discussed beyond the bounds of the workshop without their written permission.

Please note that we plan to produce a summary report of the workshop, excluding any information shared on a confidential basis, for distribution to you and other colleagues who could not attend. Participants will receive a review draft of the summary report before it is finalized.

Please let us know if we and other participants have permission to reference your participation in the workshop in post-workshop discussions and written products, by filling out the following information and returning to Alison Kruger in La Jolla or at [redacted] in advance of the workshop.

☐ I give my permission to have my participation in this workshop be acknowledged in the final workshop report and other products.

Name_____

Notes (e.g. preferred affiliation): _____

_____

_____

Draft Agenda

Climate Accountability, Public Opinion, and Legal Strategies Workshop

Martin Johnson House, Scripps Institution of Oceanography

La Jolla, CA 14 & 15 June 2012

Workshop Goals

- Compare the evolution of public attitudes and legal strategies for tobacco control and anthropogenic climate change. Can we use the lessons from tobacco education, laws, and litigation to address climate change?
- Explore which impacts can be most compellingly attributed to climate change, both scientifically, and in the public mind, and consider options for communicating the scientific understanding of attribution in ways most useful to inform both public understanding and legal strategies.
- Explore the degree to which public (including judge and jury) acceptance of the causal relationships of climate impacts to fossil fuel production and/or emissions would increase the prospects for an effective strategy for US-focused climate litigation.
- Consider the viability of diverse strategies, including the legal merits of targeting carbon producers – as opposed to carbon emitters – for US-focused climate mitigation.
- Identify promising legal and other options and scope out the development of mutually reinforcing intellectual, legal, and/or public strategies to further them.

14 JUNE 2012

7:45 am Meet in La Jolla Shores hotel lobby for shuttle to workshop venue

8:00 am Coffee, Light Breakfast

8:30 am Welcome and Charge to Participants

Welcome, opening remarks

Workshop goals and objectives – why this focus, why now?

Workshop logistics and process

Introduction of participants

9:00 am Session 1: The lay of the land: key issues and concepts

5 presentations @ 5 mins ea; followed by moderated discussion

1) A brief history of the tobacco wars: epidemiology, "doubt is our product," litigation and other strategies.

2) Climate science and attribution.

3) Attribution of emissions to carbon producers

4) The legal landscape: fundamentals of law, climate change, damages, plaintiffs, and defendants.

5) Public opinion and risk perception on tobacco and climate

10: 30 am Break

11:00 am Session 2: Lessons From Tobacco Control: Legal and Public Strategies

5 Presentations @ 5 mins ea.; followed by moderated discussion

Key issue: What lessons can we draw from the history of public and legal strategies for controlling tobacco that might be applicable to address climate change?

12:30 pm Lunch

1:30 pm Session 3: Attribution of Impacts and Associated Damages to Carbon and Climate Change: State of the Science and Expert Judgment

2 Presentations @ < 10 minutes; followed by moderated discussion

Key issue: What impacts can be most compellingly attributed to carbon and climate change?

3:00 pm Break

3:15 pm Session 4: Climate Legal Strategies: Options and Prospects

3 Presentations @ 7 minutes; followed by moderated discussion

Key issues: What potential options for US-focused climate litigation appear most promising? To what extent would greater public (including judge and jury) acceptance of the causal relationships of climate impacts to fossil fuel production and/or emissions enhance the prospects for success?

5:00 pm Wrap up

6:30 pm Drinks and Dinner at the Home of Lew & Connie Branscomb

6:15 sharp - shuttle will be provided from La Jolla Shores Hotel.

15 JUNE 2012

7:45 am Meet in La Jolla Shores lobby for shuttle to workshop venue

8:00 am Coffee, Light Breakfast

8:30 am Session 5: Attribution of Emissions to Carbon Producers

Presentation @ 10 minutes; followed by moderated discussion

Key issue: To what extent can new analyses of the attribution of emissions to major carbon producers increase the prospect for establishing legal and public accountability?

9:30 am Session 6: Innovative Strategies for Climate Accountability

2 presentations @ 7 minutes + moderated discussion

11:00 am Break

11:15 am Session 7: Public Opinion and Climate Accountability

Moderated discussion drawing from key perspectives in public opinion.
Key issues: What is the role of public opinion in climate accountability?

12:45 pm Lunch

2:00 p.m. Session 8: Discussion, outcomes next steps

4:00 p.m. Wrap up

7:30 p.m. Drinks and Dinner at La Jolla Shores Hotel restaurant

Climate Accountability, Public Opinion, and Legal Strategies Workshop
June 14 & 15, 2012

Participant List as of June 4, 2012

Workshop Organizers

Dr. Naomi Oreskes, Professor of History and Science Studies at the University of California, San Diego, Adjunct Professor of Geosciences at the Scripps Institution of Oceanography, La Jolla, CA

Dr. Peter C. Frumhoff, Director of Science and Policy, Union of Concerned Scientists, Cambridge, MA

Richard Heede, Principal, Climate Mitigation Services, Snowmass, CO

Dr. Lewis M. Branscomb, Aetna Professor of Public Policy and Corporate Management (emeritus), John F. Kennedy School of Government, Harvard University, Cambridge, MA

Angela Ledford Anderson, Director, Climate and Energy Program, Union of Concerned Scientists, Washington, DC

Workshop Participants

Dr. Myles Allen, University Lecturer in Physics, University of Oxford, United Kingdom

Richard E. Ayres, Attorney, The Ayres Law Group, Washington, DC

Dr. Brenda Ekwurzel, Climate Scientist, Assistant Director of Climate Research and Analysis

Sharon Eubanks, Senior Litigation Counsel, Sanford Wittels & Heisler, LLP, Washington, DC

Dr. Stanton A. Glantz, Professor, School of Medicine, University of California, San Francisco, CA

James Hoggan, President, Hoggan & Associates, Vancouver, BC

Stephen Leonard, President, Australian Climate Justice Program, Australia

Dr. Michael MacCracken, Chief Scientist, Climate Institute, Washington, DC

Dr. John Mashey, Computer Scientist, DeSmogBlog

Joe Mendelson, Director, Global Warming Policy, National Wildlife Federation, Washington, DC

Jeff Nesbit, Executive Director, Climate Nexus, New York, NY

Dr. Michael Oppenheimer, Albert G. Milbank Professor of Geosciences and International Affairs, Woodrow Wilson School and the Department of Geosciences at Princeton University, Princeton, NJ

Matt Pawa, President, Pawa Law Group, P.C., Founder, The Global Warming Legal Action Project, Newton, MA

Dr. Robert N. Proctor, Professor of the History of Science, Stanford University, Stanford, CA

Janill Richards, Supervising Deputy Attorney General, Office of CA Attorney General; Coordinator, Global Warming Initiatives, Oakland, CA

Dr. Paul Slovic**,** Founder and President, Decision Research, Eugene, OR

Dr. Claudia Tebaldi, Research Scientist, Climate Central, Boulder, CO

Dr. Ana Unruh Cohen, Deputy Staff Director, Natural Resources Committee, U.S. House of Representatives, Washington, DC

Roberta Walburn, Of Counsel, Robins, Kaplan, Miller & Ciresi LLP, Minneapolis, MN

Mary Wood, Philip H. Knight Professor of Law, Faculty Director, Environmental and Natural Resources Law Program, University of Oregon School of Law, Eugene, OR

Daniel Yankelovich, Chairman and Co-Founder, Viewpoint Learning, Inc., San Diego, CA

From: **Mary Wood** mwood@uoregon.edu
Subject: Re: Faculty Accomplishments for Oregon Lawyer Online
Date: June 12, 2012 at 9:17 AM
To: Alison Wayner agreen@uoregon.edu

MW

Yes, no problem. Do you also want my speech at the tr bal timber conference? It should be posted on my website under speeches. Don't take the climate one in La Jolla this week as that is a closed workshop, and should not be publicized, but the tribal one is fine along with the ones below. Thanks

Mary Christina Wood
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On Jun 12, 2012, at 9:13 AM, Alison Wayner wrote:

> Good Morning, Mary,
>
> The upcoming edition of Oregon Lawyer Online will feature a section titled "Above and Beyond" that will highlight faculty accomplishments. With your permission, we would like to use the information that was included in the most recent two editions of the "Faculty Accomplishments" newsletter published by Mohsen Manesh. I have pasted your entry below for review.
>
> Thank you,
> Ali
>
> On February 25, **Mary Wood** presented on a panel entitled "Nature in Brief: Creative Legal Approaches to Accountability" at the conference New Directions in Environmental Law: [Re]Claiming Accountability at Yale Law School. Wood also presented on two panels at the Public Interest Environmental Law Conference held at the law school in Eugene: "Taking the Long View When Allocating Water Resources" on March 2 and "Public Trust and Atmospheric Trust Litigation" on March 3.
>
> Alison Wayner
> Communications Manager
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> 541-346-7355 (office)
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>
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From: **Mary Wood** mwood@uoregon.edu [redacted]
Subject: Fwd: First follow-up from La Jolla
Date: July 15, 2012 at 10:14 AM
To: Isla Dane isla@uoregon.edu

MW

hi Isla - could you print all and include this email in my speech file? Jill knows that system. I have a file for every presentation I do, to help keep track. Thanks. Mims

Mary Christina Wood
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Begin forwarded message:

From: Alison Kruger <AKruger@ucsusa.org>
Date: July 3, 2012 8:50:02 AM PDT
To: "Myles Allen ([redacted])" <[redacted]>, "[redacted]" <[redacted]>, Brenda Ekwurzel [redacted], "glantz@medicine.ucsf.edu" <glantz@medicine.ucsf.edu>, "Mike MacCracken [redacted]" <[redacted]>, "Paul Slovic (pslovic@uoregon.edu)" <pslovic@uoregon.edu>, "claudia tebaldi [redacted]" "Jasper Teulings [redacted]", "Mary Wood (mwood@law.uoregon.edu)" <mwood@law.uoregon.edu>, [redacted]
Cc: "Oreskes, Naomi (naoreskes@ucsd.edu)" <naoreskes@ucsd.edu>, Peter Frumhoff [redacted], "Rick Heede [redacted]" "Angela L. Anderson" <[redacted]>, Seth Shulman <[redacted]>, "Eric St. Jacques" <[redacted]>
Subject: First follow-up from La Jolla

Dear all:

On behalf of the organizers of the workshop on Climate Accountability, Public Opinion, and Legal Strategies, I am writing to thank you for coming out to La Jolla to share your perspectives. We greatly enjoyed meeting you all, and the conversations were valuable in themselves and as they inform initiatives that many continue to advance.

Attached please find for your reference:

- Participant list and contact information
- Slides presented at the workshop

For any administrative questions after July 12, please reach out to Eric St. Jacques, [redacted]

The organizers will be in touch later this summer regarding a workshop summary.

Kind regards,
Alison

Alison Kruger
Union of Concerned Scientists
Two Brattle Square, 6th Floor
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Direct: 617 301 8088

Founded in 1969, the Union of Concerned Scientists is an independent, science-based nonprofit working for a healthy environment and a safer world.

Participants and contac...2.docx

Slides - Climate Accou...012.zip

Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

SCRIPPS INSTITUTION OF OCEANOGRAPHY
GLOBAL DISCOVERIES FOR TOMORROW'S WORLD

Climate Accountability, Public Opinion, and Legal Strategies Workshop

June 14 & 15, 2012

Workshop Organizers

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Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

SCRIPPS INSTITUTION OF OCEANOGRAPHY
GLOBAL DISCOVERIES FOR TOMORROW'S WORLD

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Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

SCRIPPS INSTITUTION OF OCEANOGRAPHY
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Daniel (Dan) Yankelovich
Chair and Co-Founder, Public Agenda (with Cyrus Vance), San Diego, CA
Email: [redacted]

Rapporteur

Seth Shulman, Senior Staff Writer, Union of Concerned Scientists in Cambridge, MA
Phone: 617-301-8068
Email: [redacted]

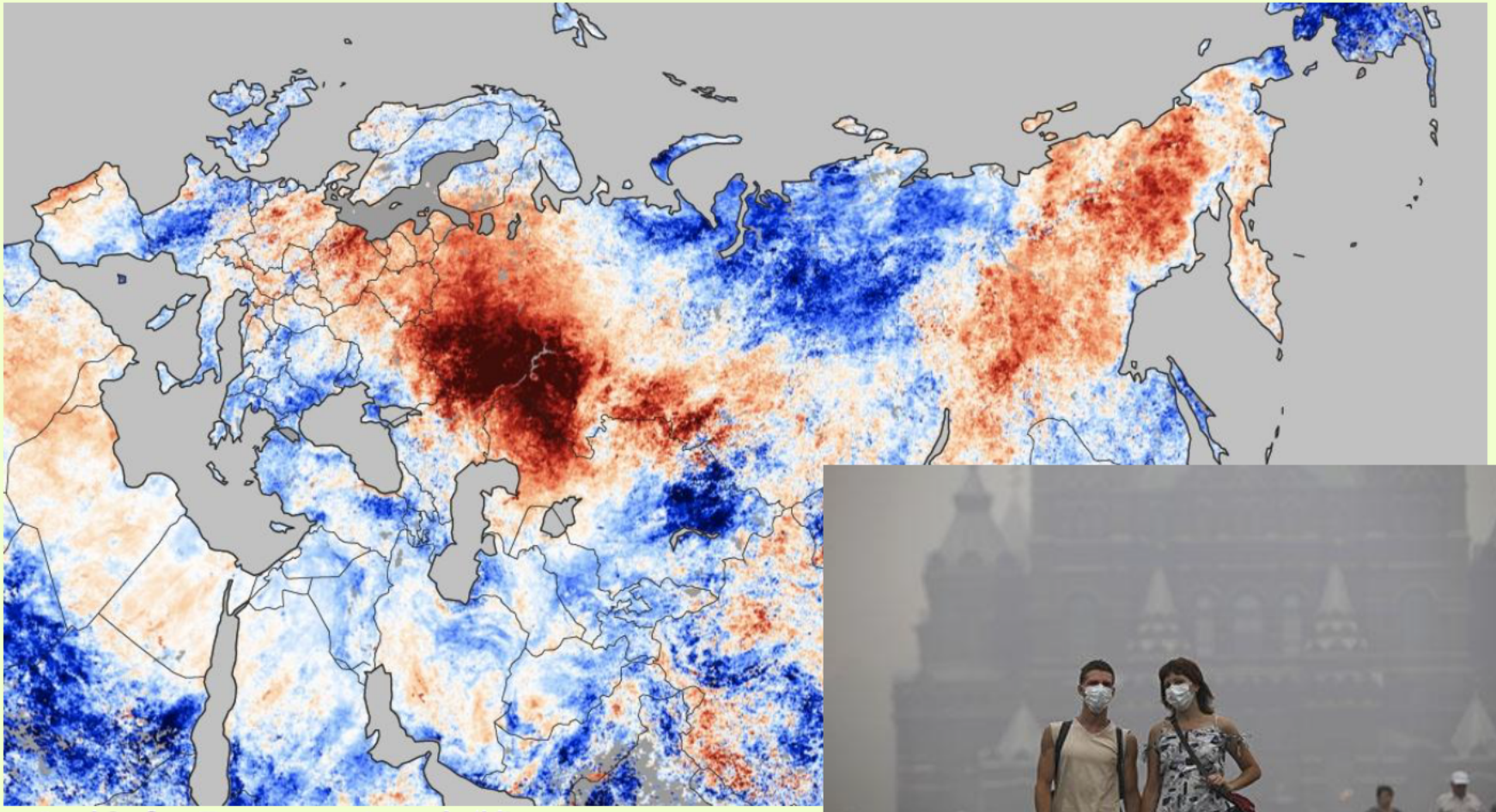
Different approaches to attribution of harmful weather events

Myles Allen
School of Geography and the Environment &
Department of Physics
University of Oxford

climate*prediction*.net

UNIVERSITY OF OXFORD

The 2010 Russian heatwave: ~50,000 deaths, $15bn cost to Russian economy



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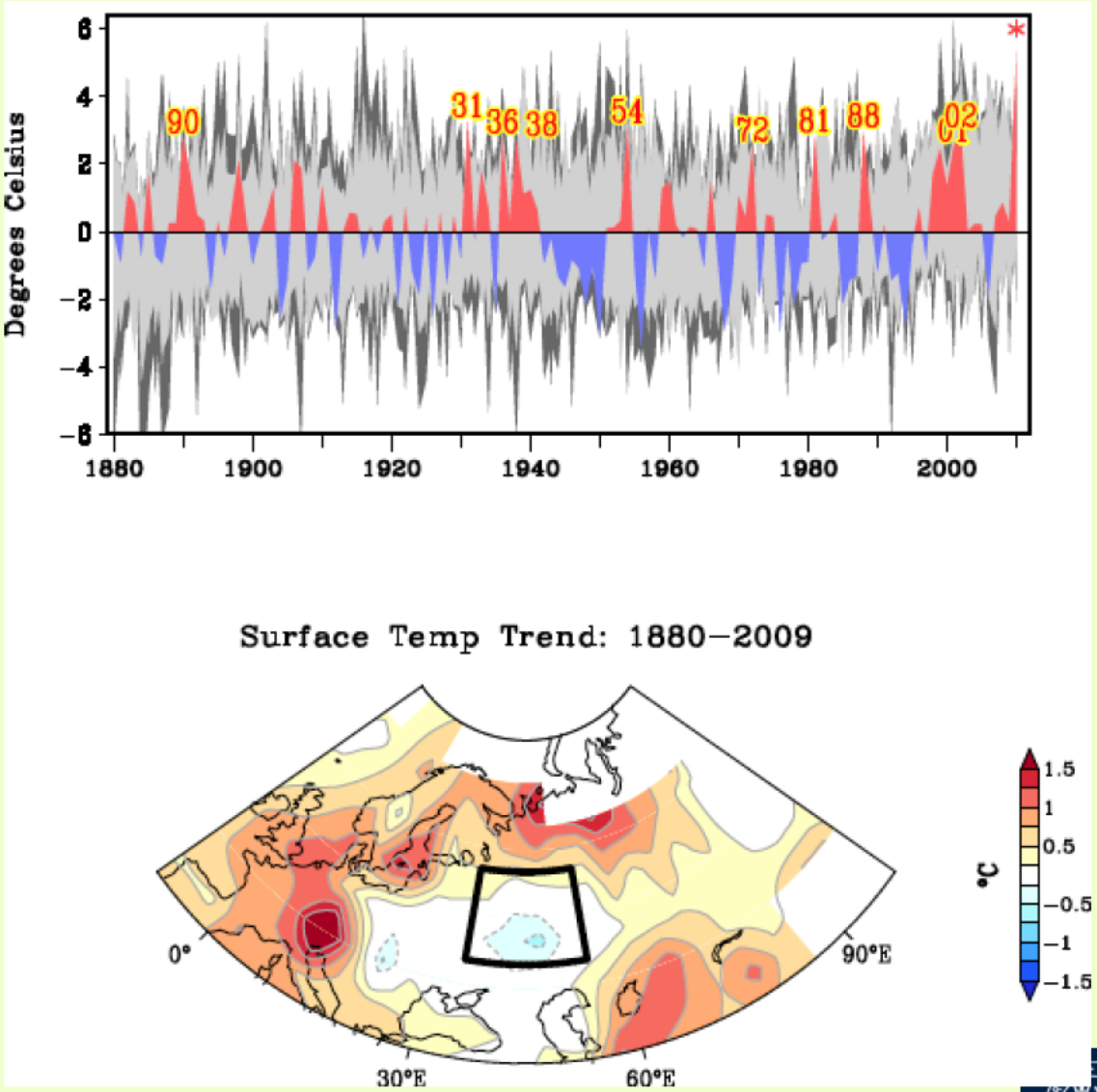
Apparently contradictory statements

- "…the intense 2010 Russian heat wave was mainly due to natural internal atmospheric variability."
  - Dole et al, *Geophysical Research Letters*, 2011
- "we estimate … an approximate 80% probability that the 2010 July heat record would not have occurred without climate warming."
  - Rahmstorf & Coumou, *Proc. Nat. Acad. Sci.*, 2011
- "we're not only loading the dice, we're painting more dots on the dice. We're not only rolling more 12s, we're rolling 13s and 14s and soon 15s and 16s."
  - Al Gore, September, 2011

No significant trend in Western Russian summer temperatures: no “single-step attribution”



Dole et al, 2011

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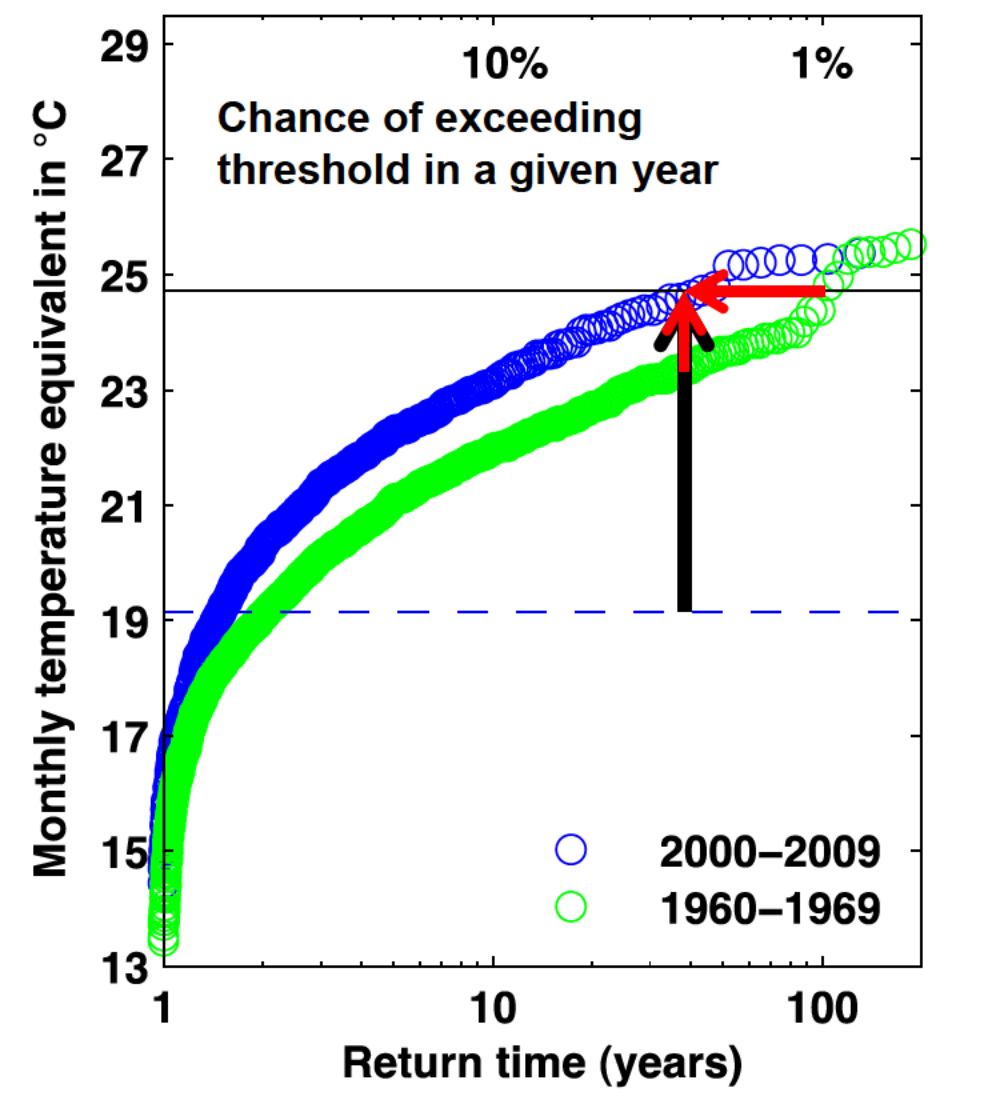
"Multi-step attribution": model estimates of heat wave risk in Central Russia: 1960s versus 2000s

Not "impossible without warming"



"Mainly externally driven"

"Mainly internally generated"

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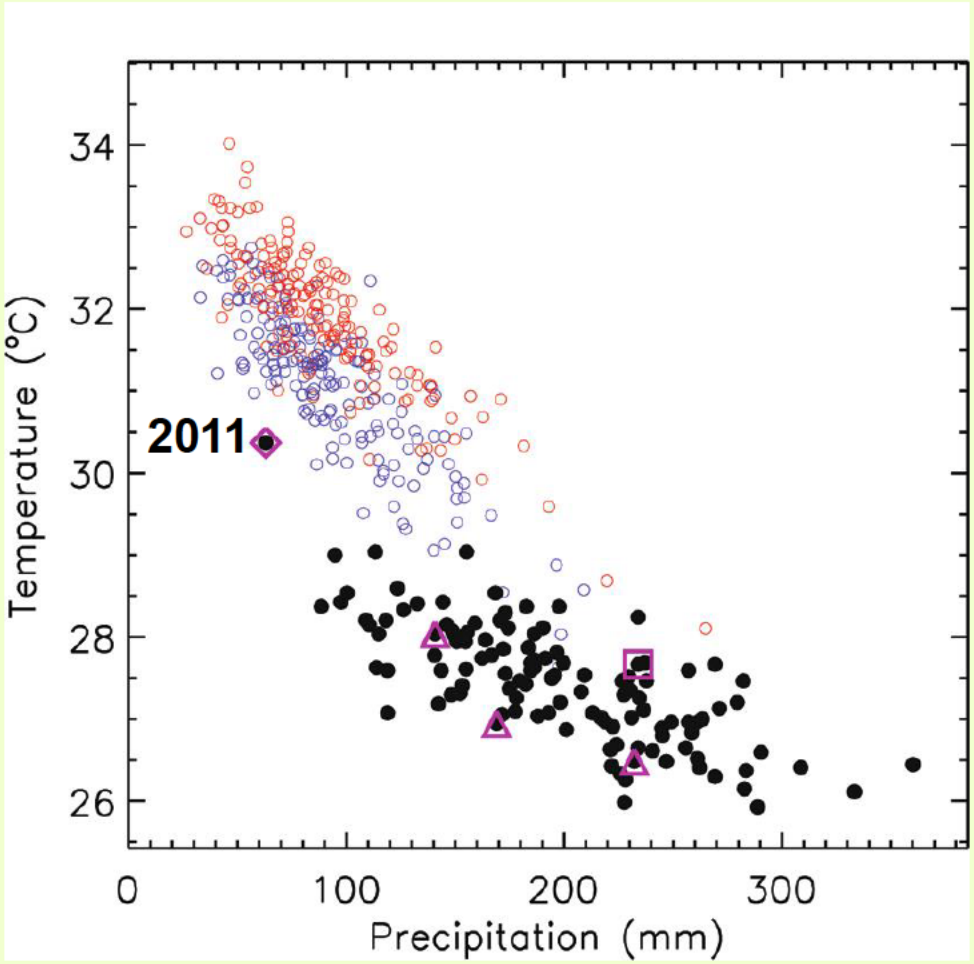
Was the 2010 Russian heat-wave really "mainly natural in origin"?

- July temperatures in 2010 were 6°C above normal, of which <2°C can be "blamed" on warming since 1960.
- So in terms of magnitude, the event was indeed "mostly natural".
- But the (very likely mostly anthropogenic) warming that occurred since 1960 increased the probability of an event of this magnitude from one-percent-per-year to three-percent-per-year.
- So in terms of probability, it could be argued the event was "mostly anthropogenic".

Attribution of harm depends on how the question is posed

- Harm is typically caused by tolerance thresholds being exceeded.
  - Suppose human influence on climate increased the risk of a record-breaking heatwave by a factor of 4.
  - Should we attribute 75% of the harm caused by that heatwave to human influence on climate?
  - No – some of this harm would have been caused by a non-record-breaking heatwave.
  - So we need to extend hydrometeorological modelling to explicit impact modelling to compare probability distributions of actual damage: no-one has done this yet.

Some increase in the odds of the 2011 Texas heat-wave: (Rupp et al, 2012)



- **Observed JJA Temperature and Precipitation over 1961-2011**
- **Model-simulations 1960s vs. 2000s**
- **Some increase in relative risk.**
- **Absolute risk is harder: model bias.**

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EXPLAINING EXTREME EVENTS OF 2011 FROM A CLIMATE PERSPECTIVE

THOMAS C. PETERSON, PETER A. STOTT AND STEPHANIE HERRING, EDITORS

Using a variety of methodologies, six extreme events of the previous year are explained from a climate perspective.

INTRODUCTION

PETER A. STOTT—MET OFFICE HADLEY CENTRE, UNITED KINGDOM; THOMAS C. PETERSON—NOAA NATIONAL CLIMATIC DATA CENTER, ASHEVILLE, NORTH CAROLINA; STEPHANIE HERRING—NOAA OFFICE OF PROGRAM PLANNING AND INTEGRATION, SILVER SPRING, MARYLAND

Every year, the Bulletin of the AMS publishes an annual report on the State of the Climate [e.g., see the Blunden and Arndt (2012) supplement to this issue]. That report does an excellent job of documenting global weather and climate conditions of the previous year and putting them into accurate historical perspective. But it does not address the causes. One of the reasons is that the scientists working at understanding the causes of various extreme events are generally not the same scientists analyzing the magnitude of the events and writing the State of the Climate. Another reason is that explaining the causes of specific extreme events in near-real time is severely stretching the current state of the science.

Our report is a way to foster the growth of this science. Other reports, such as those by the Intergovernmental Panel on Climate Change (IPCC), have focused on understanding changes over longer time scales and larger geographic regions. For example, assessing the state of the climate and science, IPCC (Allen et al. 2012) concluded that "it is likely that anthropogenic influences have led to warming of extreme daily minimum and maximum temperatures on the global scale" and that "there is medium confidence[1] that anthropogenic influences have

[1] Likely indicates probability greater than 66%; see IPCC guidance on uncertainty language (Mastrandrea et al. 2010), which also includes guidance on expression of levels of confidence.

AFFILIATIONS: PETERSON—NOAA National Climatic Data Center, Asheville, North Carolina; STOTT—Met Office Hadley Centre, United Kingdom; HERRING—Office of Program Planning and Integration, NOAA, Silver Spring, Maryland
CORRESPONDING EDITOR: Thomas C. Peterson, NOAA National Climatic Data Center, 151 Patton Avenue, Asheville, NC 28803
E-mail: thomas.c.peterson@noaa.gov

The abstract for this article can be found in this issue, following the table of contents.
DOI:10.1175/BAMS-D-11-00021.1
In final form 4 May 2012

Attribution of harm to human influence on climate

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Department of Physics
University of Oxford
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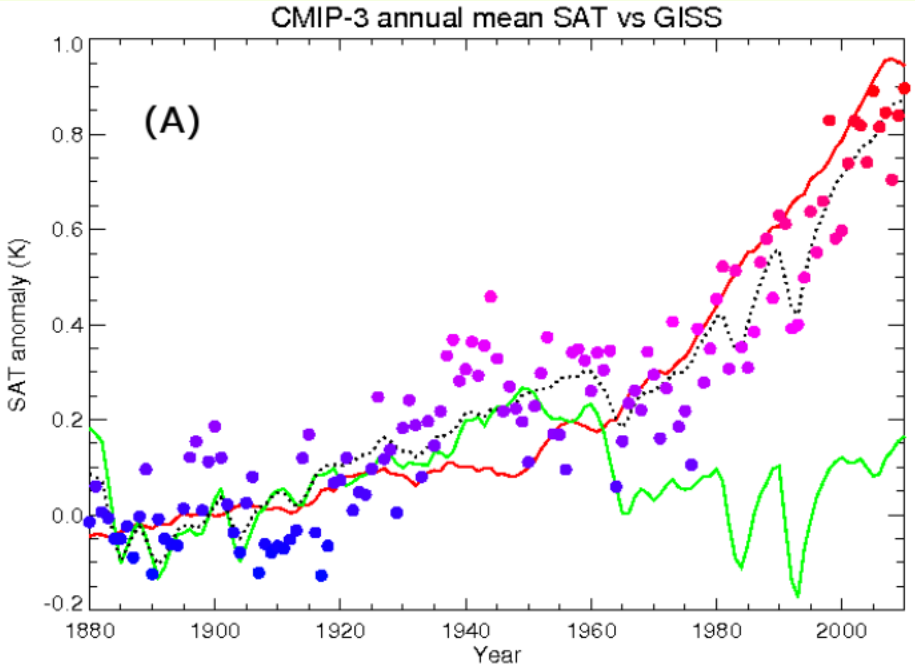
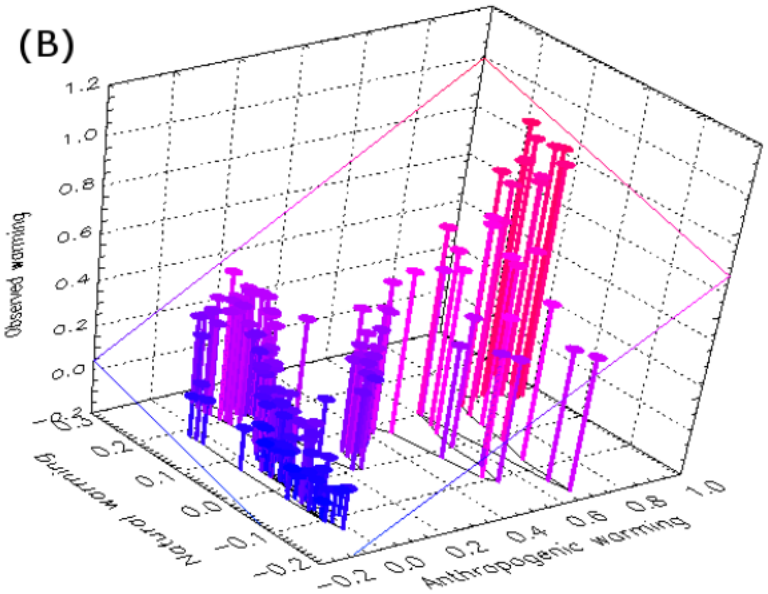
Hypothesis testing: at the heart of attribution





Can we explain the observed pattern of surface temperature change, in both space and time, without human influence on climate?

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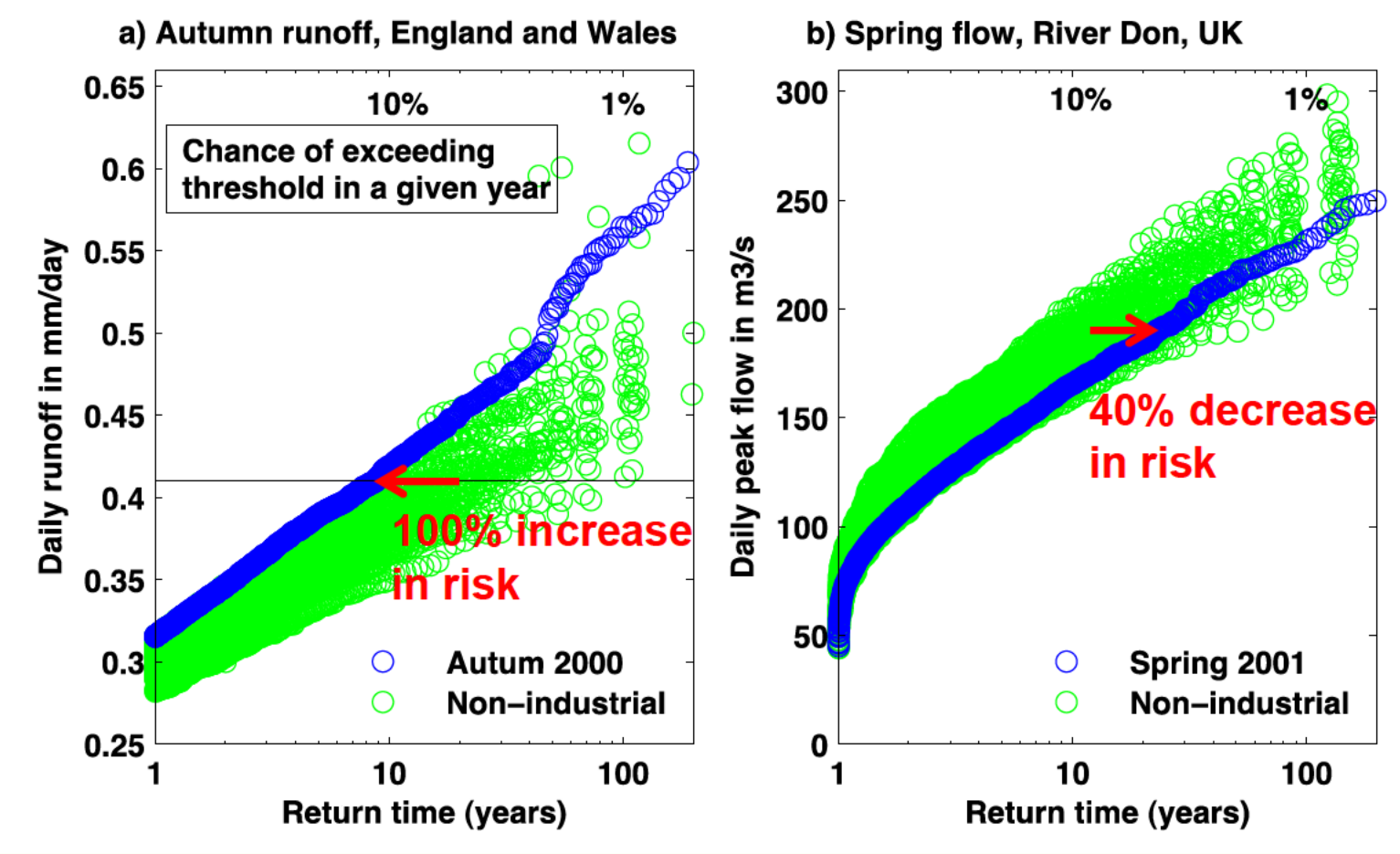
The difference between climate and weather

- WMO definition of climate - average weather over a 30-year period - *assumes* some level of stationarity.
- Lorenz (1982): “Climate is what you expect, weather is what you get”
- Updated for the 21st century: “Climate is what you affect, weather is what gets you”
- Weather is directly observable, but unpredictable.
- Climate is predictable, but not directly observable.

Not all events are being made more likely

A flood that happened – and one that did not



Pall et al, 2011 and Kay et al, 2011

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Where we are at on attribution

- Warming is unequivocal.
- Very likely most of the warming over the past 50 years is due to the observed anthropogenic increase in greenhouse gas concentrations.
  - A <10% chance that greenhouse warming is small.
  - Much less confidence about other anthropogenic factors.
- Lower confidence in attribution of hydrometeorological events: still mostly indirect.
- Even lower confidence in attribution of damage: heavily affected by changing vulnerability and counterfactual questions.

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Public Opinion and Climate Accountability

Brenda Ekwurzel
Assistant Director Climate Research & Analysis
Union of Concerned Scientists

Climate Accountability, Public Opinion, and Legal Strategies Workshop
Scripps Institution of Oceanography
La Jolla, CA
June 15, 2012

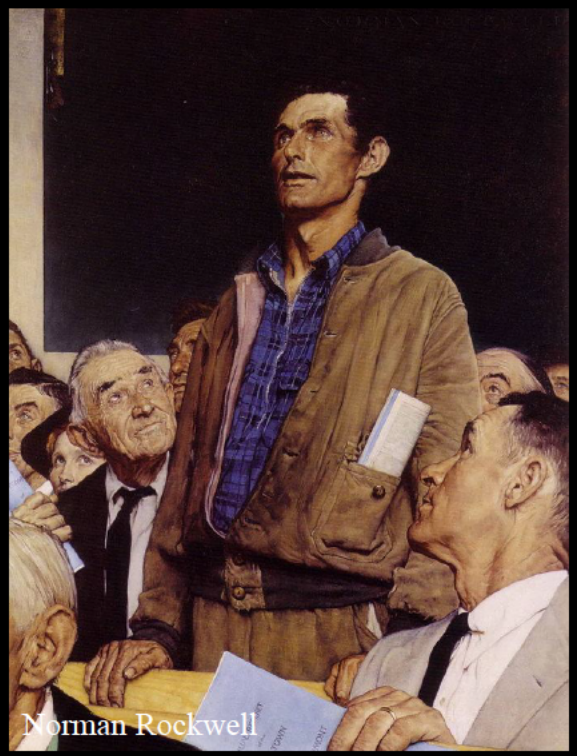
Hierarchical

Centurion Health Corporation

Egalitarian

Risk and Culture: An Essay on the Selection of Technological and Environmental Dangers, Mary Douglas and Aaron Wildavsky 1982

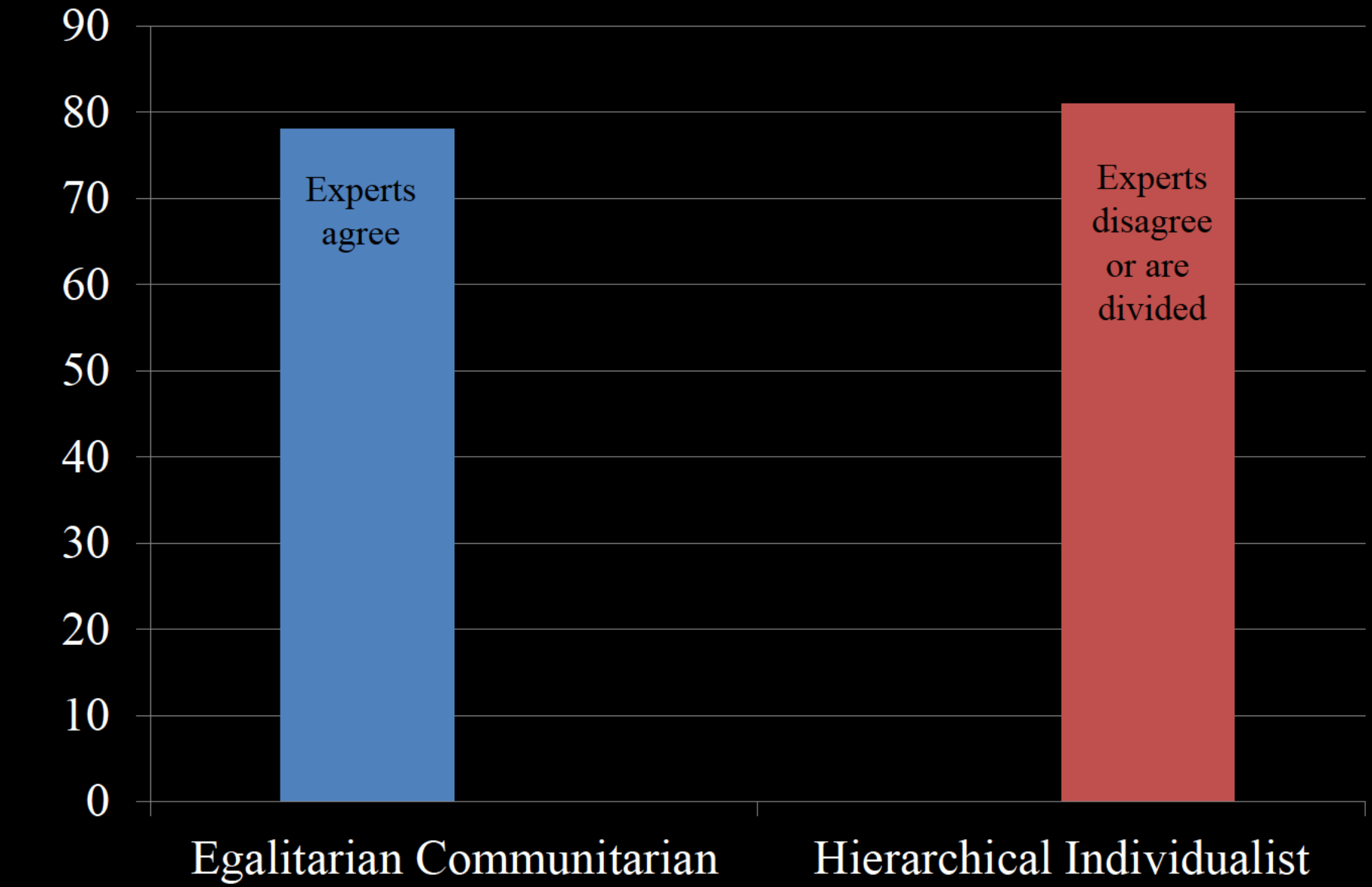
Individualist



Communitarian

Risk and Culture: An Essay on the Selection of Technological and Environmental Dangers, Mary Douglas and Aaron Wildavsky 1982

Perceptions of Scientific Agreement on Climate Change



Kahan, Dan M., Jenkins-Smith, Hank and Braman, Donald, Cultural Cognition of Scientific Consensus (February 7, 2010). Journal of Risk Research, Vol. 14, pp. 147-74, 2011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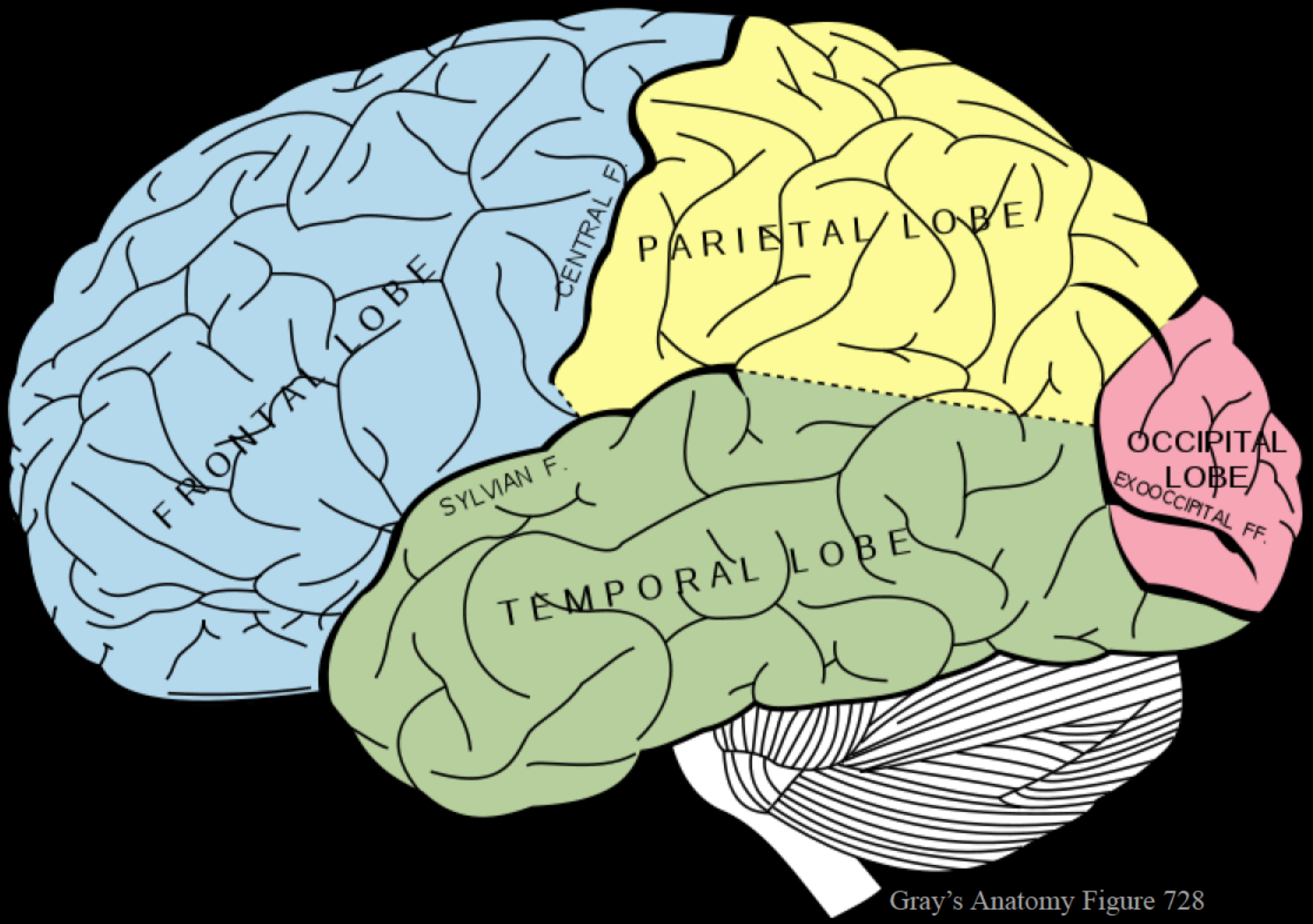
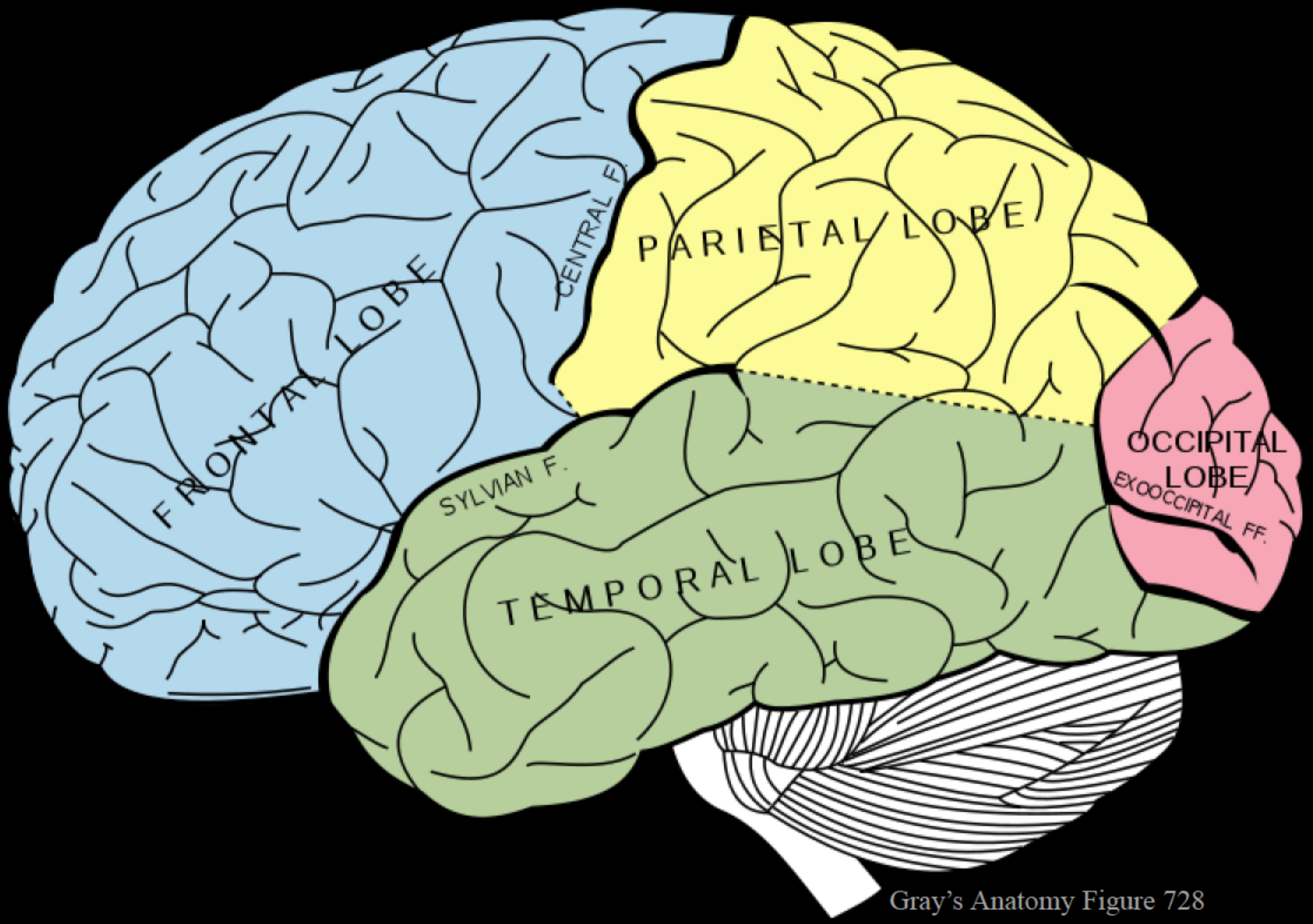


Gray's Anatomy Figure 728

Gray's Anatomy Figure 728



Gray's Anatomy Figure 728

Let’s Talk about climate change.

~~Let's Talk about climate change.~~

Should we really start on this note?

Let’s Talk about what you care about most.

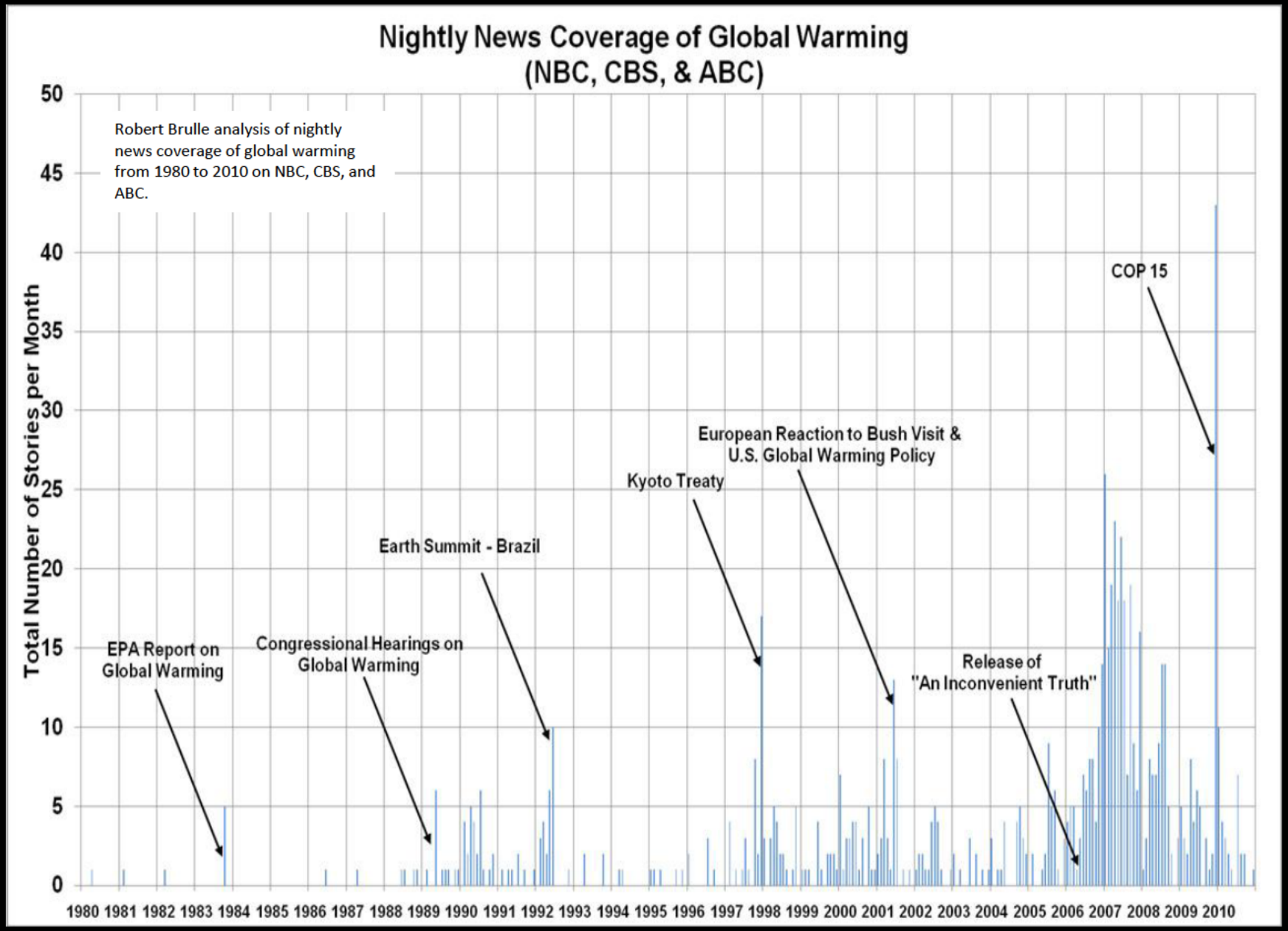
Family & Friends

Livelihood

Health

Recreation

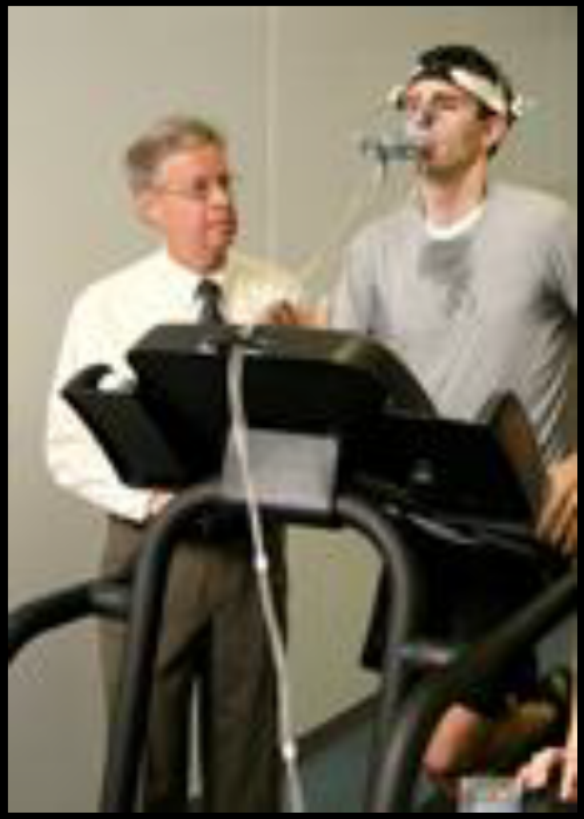

UN High Commissioner for Refugees


Nightly News Coverage of Global Warming
(NBC, CBS, & ABC)
Robert Brulle analysis of nightly news coverage of global warming from 1980 to 2010 on NBC, CBS, and ABC.
Total Number of Stories per Month
0
5
10
15
20
25
30
35
40
45
50
1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010
EPA Report on Global Warming
Congressional Hearings on Global Warming
Earth Summit - Brazil
Kyoto Treaty
European Reaction to Bush Visit & U.S. Global Warming Policy
Release of "An Inconvenient Truth"
COP 15

TEXAS HIGH SCHOOL FOOTBALL MORE THAN THE GAME

BY JOE NICK PATOSKI

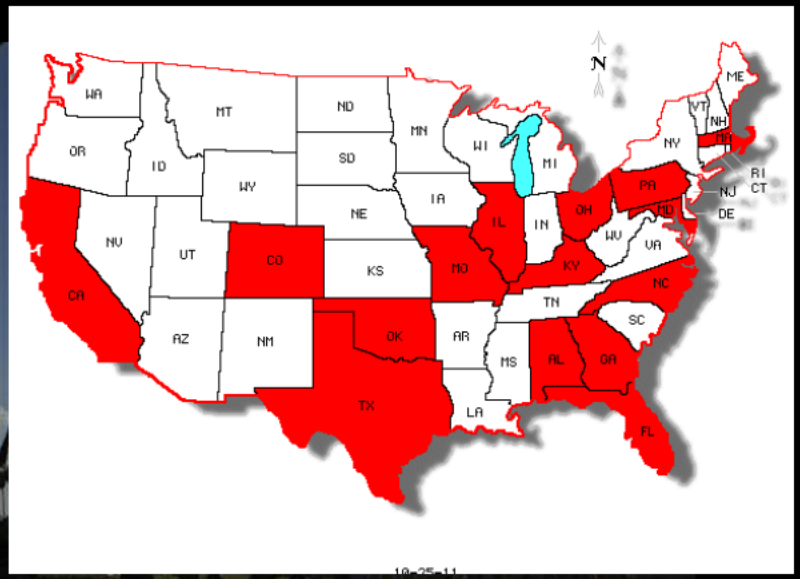
Amazon.com
September 1, 2011 publication



Michael Bergeron, director of the National Institute for Athletic Health and Performance at Sanford Health

Deke Arndt, chief of the Climate Monitoring Branch of NOAA's National Climatic Data Center

- August 2011 UCS press briefing and radio tour: **“Record Heat and Humidity Increase Risks for High School Football Players, Scientists Say”**



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print, online, and radio coverage

Los Angeles Times

THE EXAMINER
Independence • Blue Springs • Grain Valley

Heat safety is personal issue for Truman AD

TS ENTERTAINMENT HEALTH LIVING TRAVEL OPINION

MEDICINE MENTAL HEALTH HEALTHCARE REFORM GETTING BETTER DIABETES

Scientists study surge in heat-related football deaths

Coaches and players need to be vigilant during practice in a summer of record temperatures, experts say.

August 08, 2011 | By Shari Roan | Los Angeles Times Staff Writer

FOX BUSINESS
THE POWER TO PROSPER™

HEALTH CARE - PERSONAL FINANCE

Dog Days of August Can Cause Heat Illness for Young Athletes

newsradio 1000

record heat,

The Atlanta Journal-Constitution
Credible. Compelling. Complete.

Which high school football players are more likely to die in practice?

- Overweight — 85 percent of those who died in recent decades were linemen.
- In the first few weeks of practice — preseason.
- And on the field in the morning – which is perceived as a cooler, safer time but may actually have higher humidity leading to problems.

According a Reuters story scientists and climatologists say the risks for high school football players are higher than ever in this record-heat, drought-stricken summer.

KSPI SPORTS 780 AM

640 WGST
The Talk of Atlanta

"Texas scaling back high school two-a-day workouts"

By Jim Vertuno

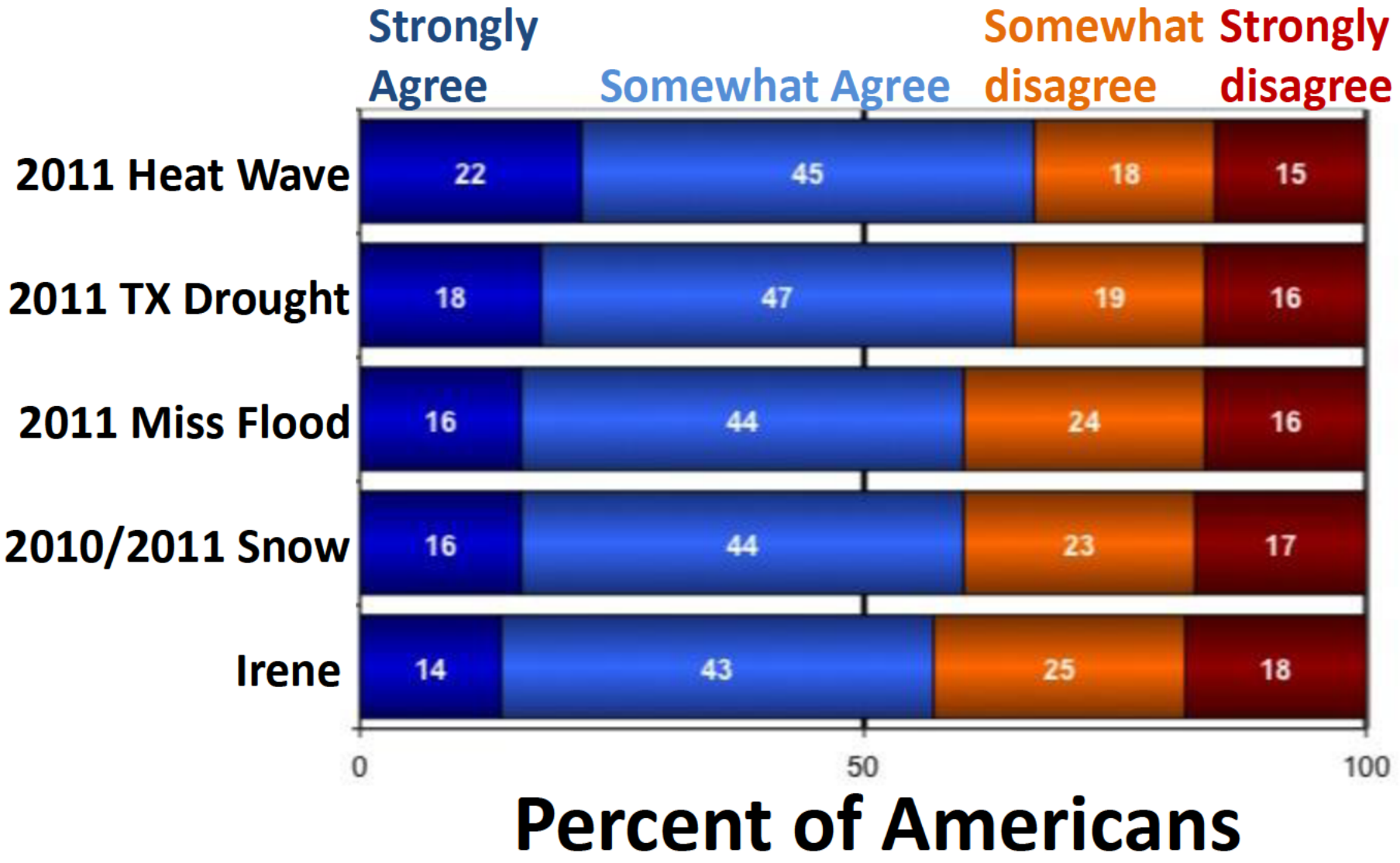
AP Sports Writer

October 20, 2011

"AUSTIN — **Texas public high school football players … rules approved Monday that would give the state some of the strongest guidelines in the country to protect athletes from heat-related injuries."**

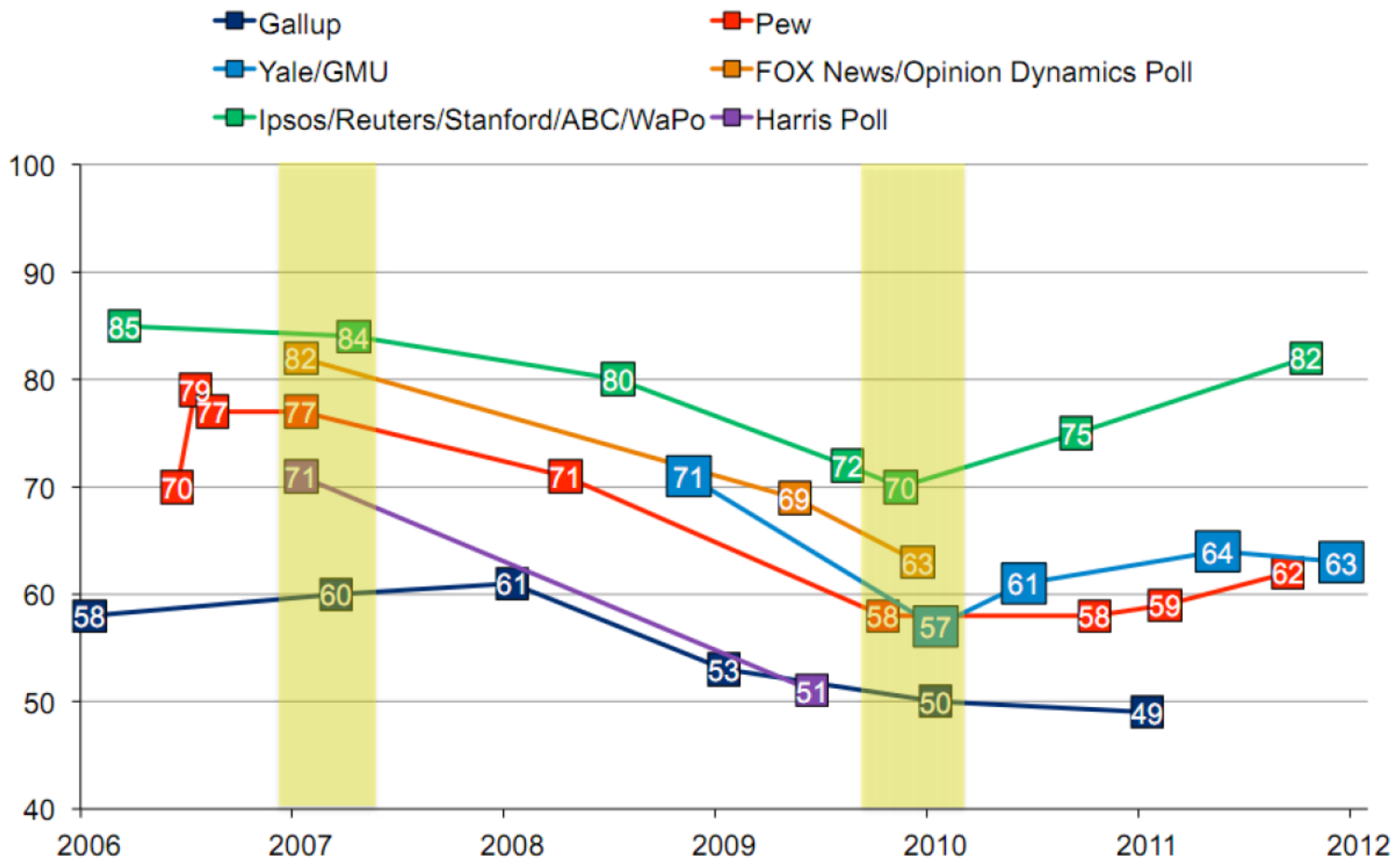
"Research shows most heat-related injuries happen in the first week of practice …Carroll said."

Some people say that global warming made each of the following events worse. How much do you agree?



Source: Yale/GMU November 2011

Is global warming happening?*



Source: Leiserowitz, 2012

*asked using differently worded questions



Carbon Majors:

attributing emissions to carbon producers and cement manufacturers 1854-2010

Rick Heede

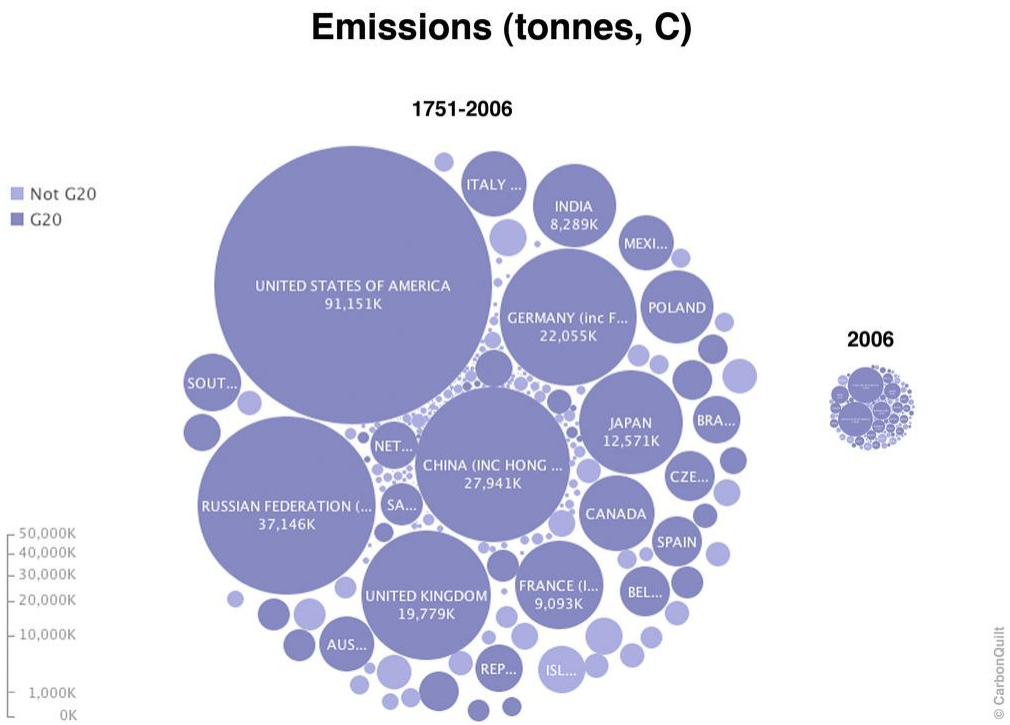
Climate Accountability, Public Opinion, & Legal Strategies

Scripps Institution of Oceanography, June 2012

Global CO_2 emissions in real time

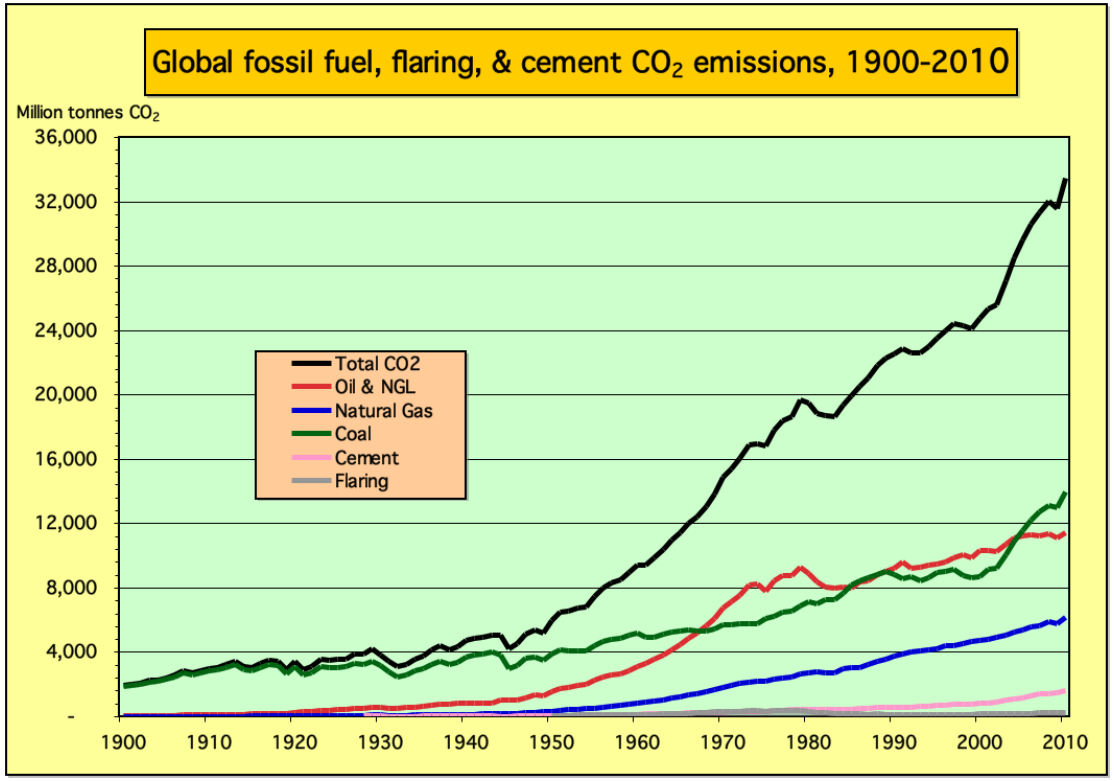
Global CO_2 emissions in real time

Attributing CO_2 1750-2010 to G20 nations



- USA: 355 $GtCO_2$ (26.6%)
- Russia/FSU: 144 $GtCO_2$ (10.8%)
- China: 116 $GtCO_2$ (8.7%)
- Germany: 84 $GtCO_2$ (6.3%)
- UK: 74 $GtCO_2$ (5.6%)
- Japan: 54 $GtCO_2$ (4.0%)
- India: 38 $GtCO_2$ (2.6%)
- France: 35 $GtCO_2$ (2.6%)
- ROW: 436 $GtCO_2$ (32.6%)
- World: 1,336 $GtCO_2$

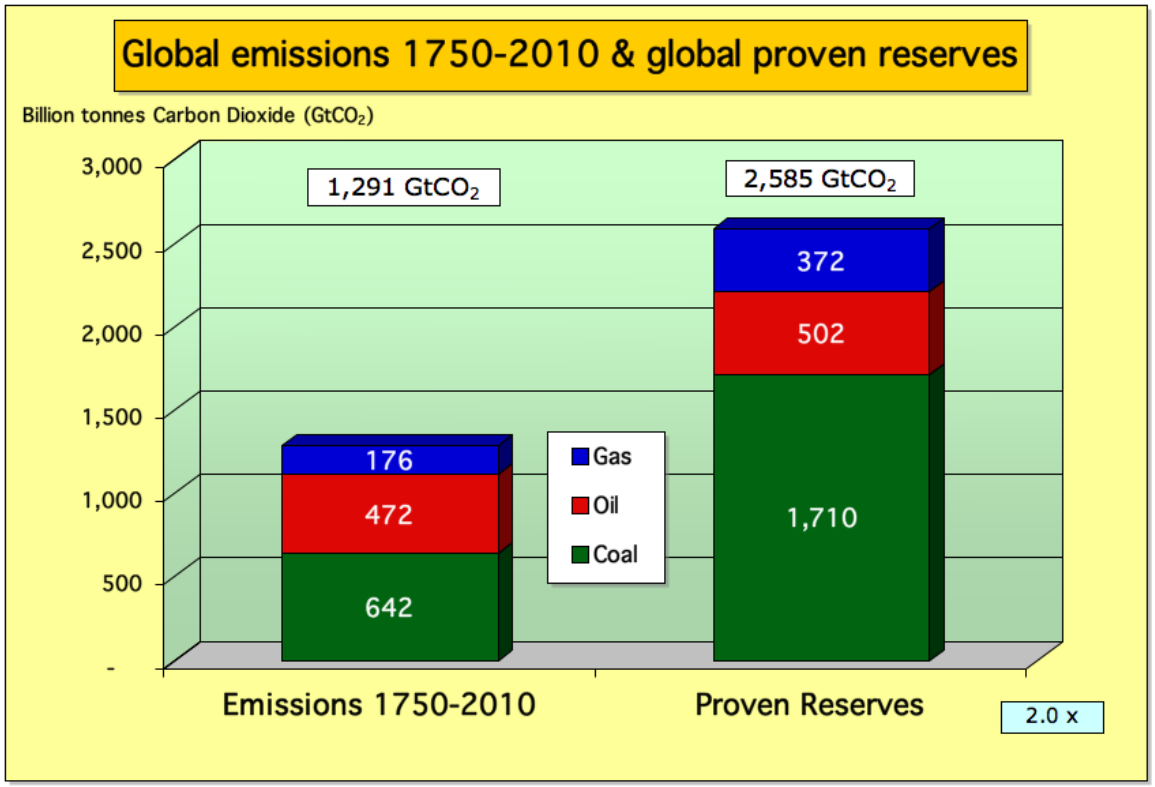
Global industrial CO_2 emissions 1900-2010 and 2010



2010 emissions

- Oil 11.4 $GtCO_2$
- Gas 6.2 $GtCO_2$
- Coal 14.0 $GtCO_2$
- Cement 1.6 $GtCO_2$
- Flaring 0.3 $GtCO_2$
- Total 33.5 $GtCO_2$
- 1,061 t CO_2 sec^{-1}

Global fossil fuel CO_2 emissions 1750-2010 & proven reserves



- Fossil fuel emissions 1750-2010:
  - 1,291 billion tonnes CO_2 (352 GtC)
  - Of which Carbon Majors 879 $GtCO_2$ (240 GtC); excludes flaring and cement
- Fossil fuel reserves (BP, EIA, WEC, OGJ):
  - 2,585 billion tonnes CO_2 (705 GtC, 2.0 x cumulative)

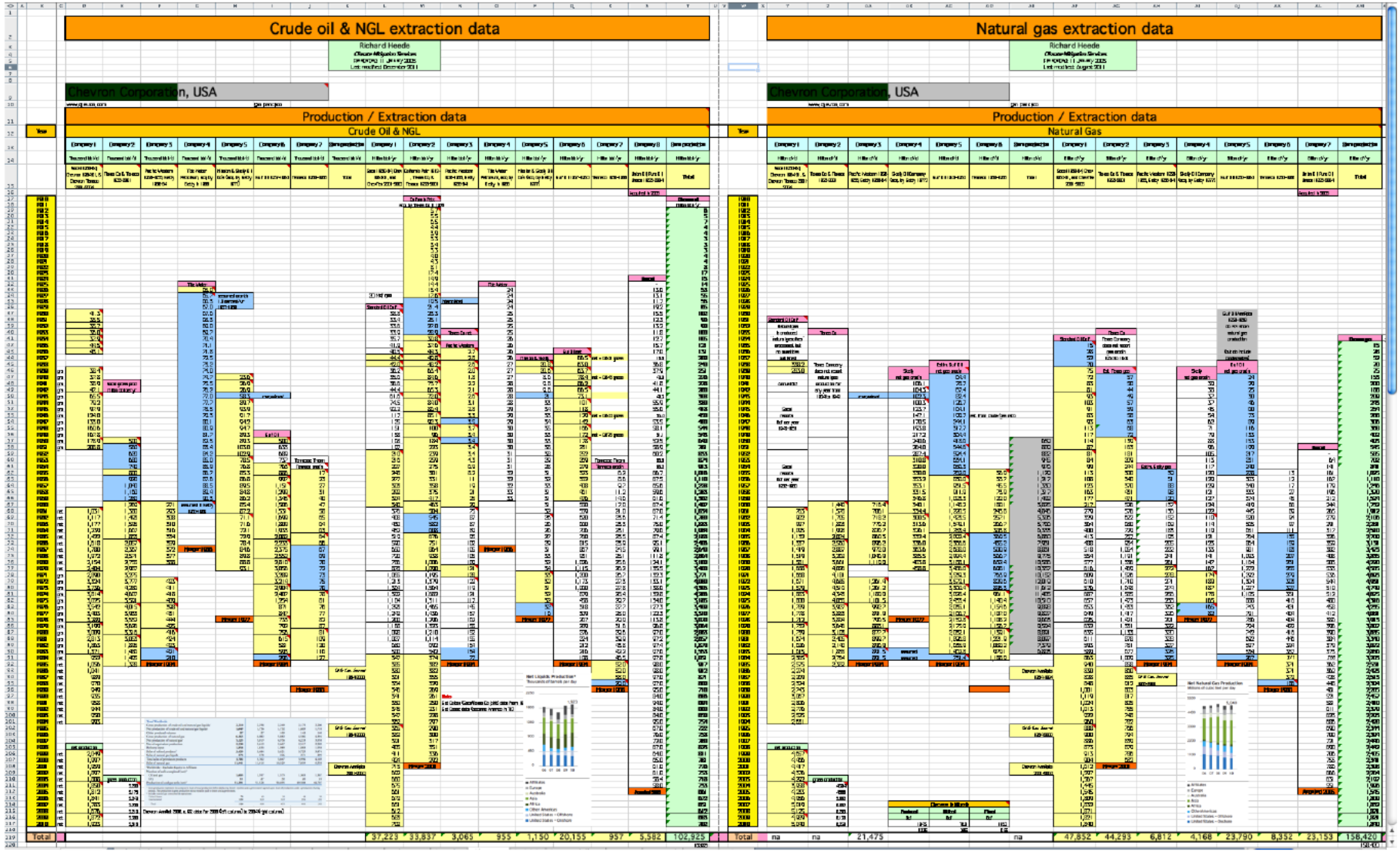
Carbon Majors: objectives

- Trace the origin of anthropogenic CO_2 and CH_4 emissions to extant producing entities:
  - Major fossil fuel producers (82 entities)
  - Major cement manufacturers (7 entities)
  - From 1854 to 2010
- Compare cumulative entity emissions to global CO_2 and CH_4 1751-2010 – using CDIAC data

Carbon Majors: the process

- Entity threshold of ≥8 MtC in recent year
- Gather production data from oil, natural gas, and coal entities
  - Annual reports, company histories, SEC filings, entity websites
  - Search libraries (British Library, Harvard, UC-Berkeley, University of Colorado, Johannesburg, Sydney)
  - Oil Gas Journal, EIA data, etc.
  - major investor-owned, privately held, state-owned, and (in centrally planned economies) state production, e.g., FSU coal, China coal.
- Gather cement production & process CO_2 data
- Enter production data in million bbl, Bcf, tonnes coal
- Sources, interpolations, data gaps, & uncertainties noted

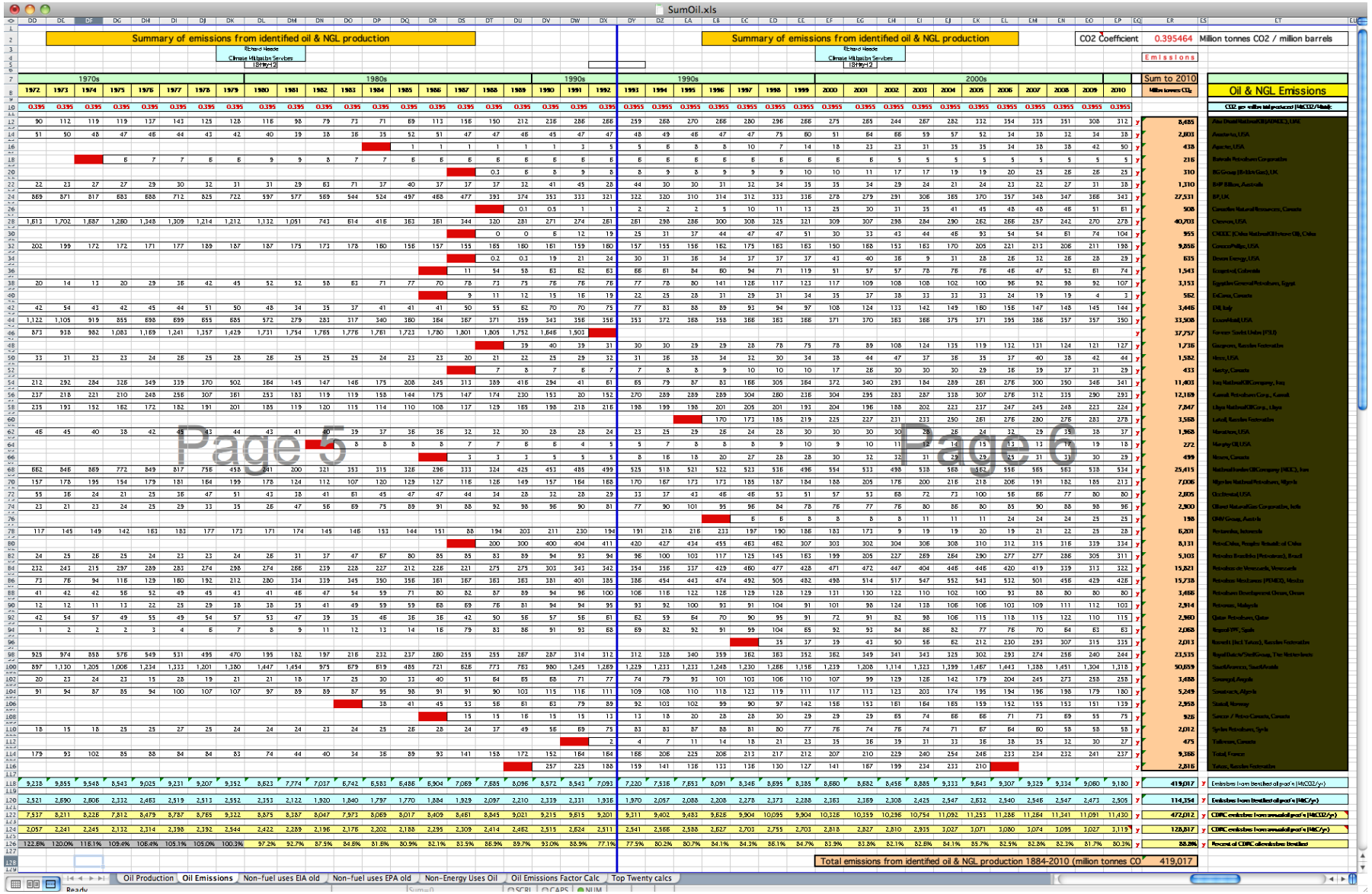
Carbon Majors: oil & NGL & natural gas production sample worksheet, 1912-2010



Carbon Majors: methodology

- Account for non-energy uses of oil (8.0 %), natural gas (1.9 %), and coal (0.02 %) using EIA, CDIAC, IPCC, and other sources
- Apply emission factors for oil, natural gas, and coal
  - Coal EFs: accounted for coal rank production where reported; assumed average thermal coal EF if not
- Estimate emissions attributed to annual and cumulative fossil fuel and cement production by 89 Carbon Major entities
- Compare each Carbon Major's cumulative emissions to global industrial emissions 1751-2010

Carbon Majors: oil & NGL emissions worksheet 1968-2010

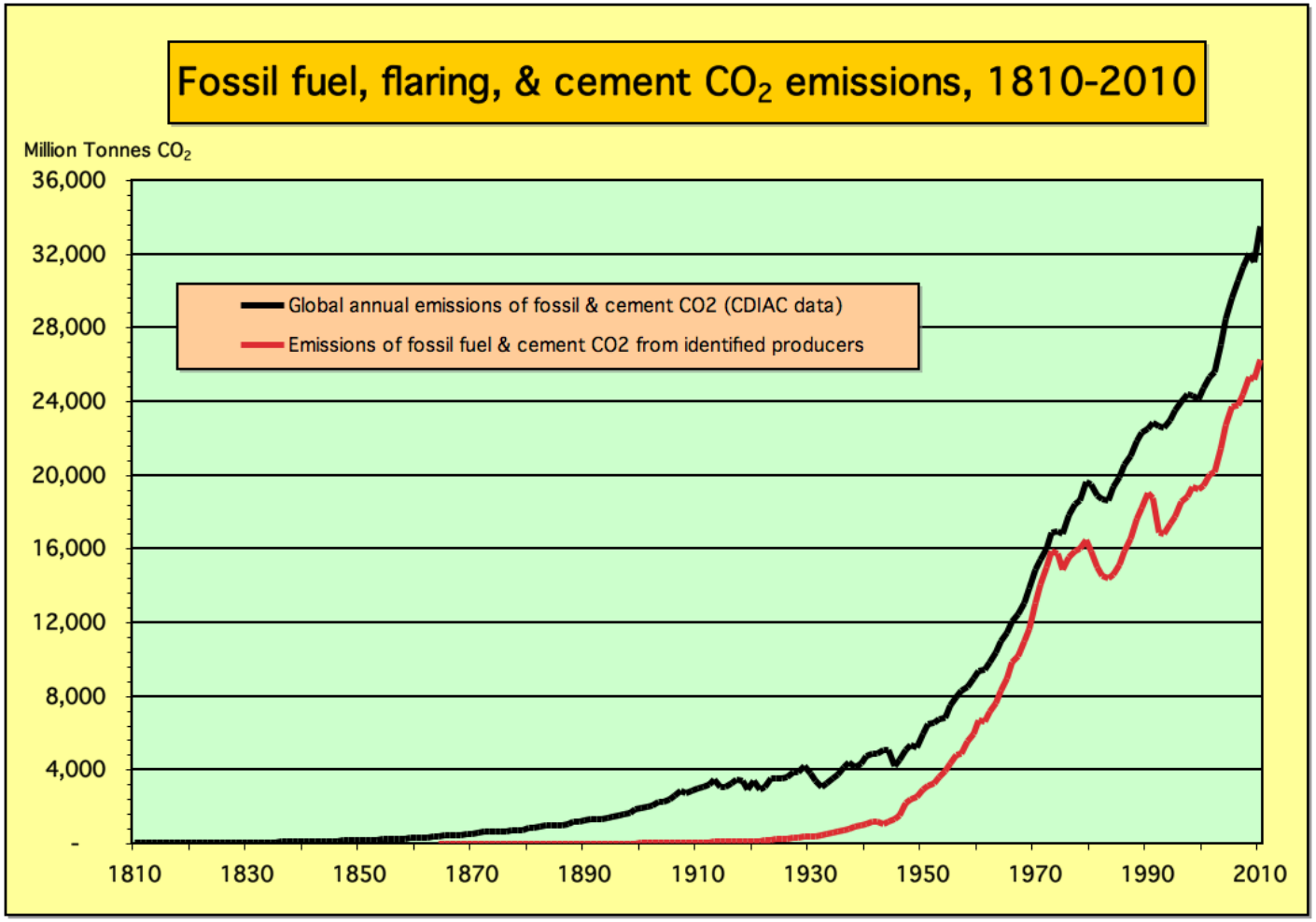


Carbon Majors: overall results

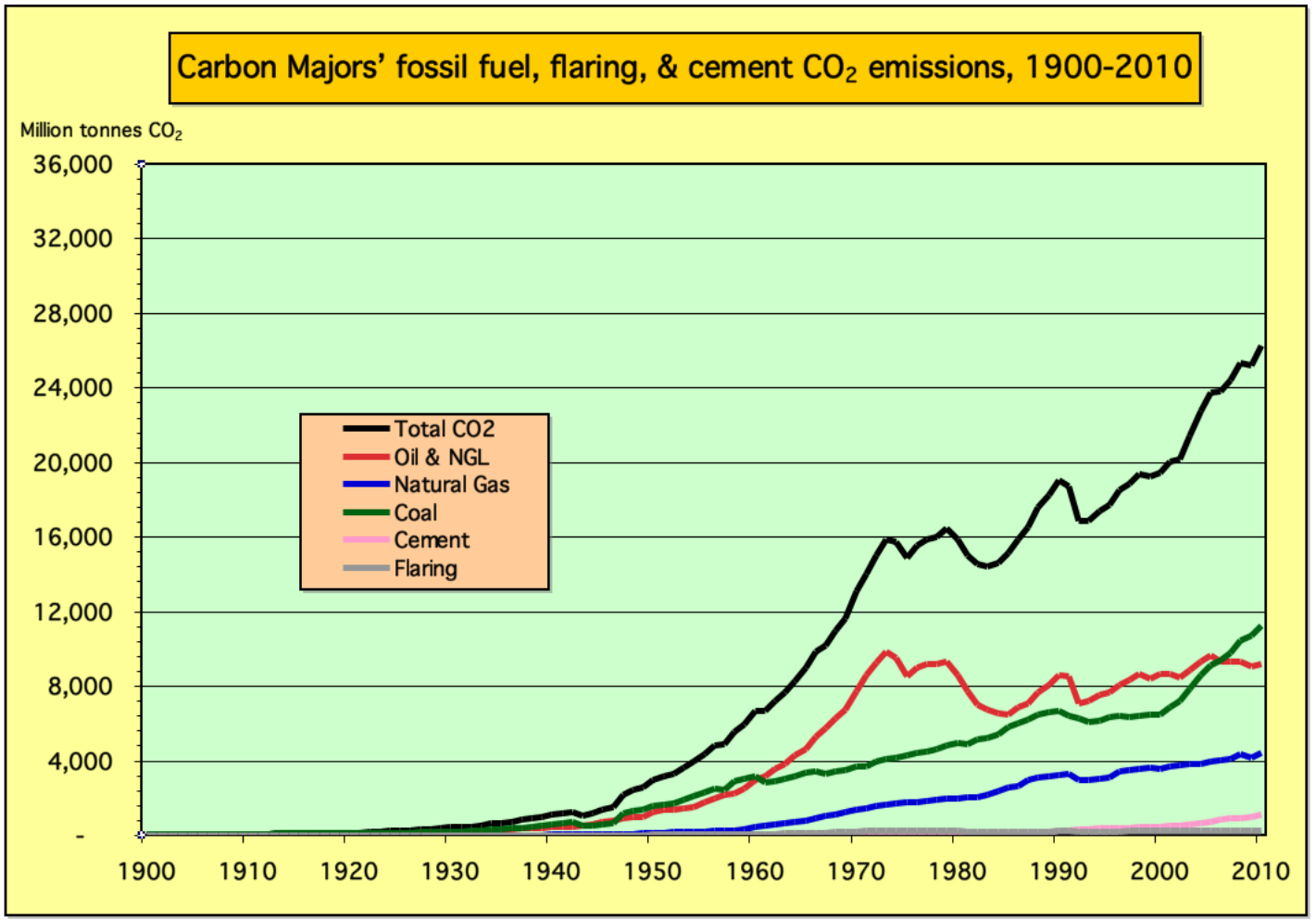
- Quantified and attributed emissions of 977 $GtCO_2e$
- Global total 1751-2010 (CDIAC): 1,448 $GtCO_2e$

Entity	Entities #	Total emissions $GtCO_2e$	Percent of total
COMBUSTION			
Oil & NGLs	53	418.9	42.9%
Natural gas	54	130.4	13.4%
Coal	36	329.6	33.7%
Flaring	54	11.6	1.2%
Cement	7	13.2	1.4%
Vented CO_2	54	3.0	0.3%
Fugitive methane	83	70.0	7.2%
Sum		976.7	100.0%
CDIAC		1,447.9	
This project percent of CDIAC			67.5%

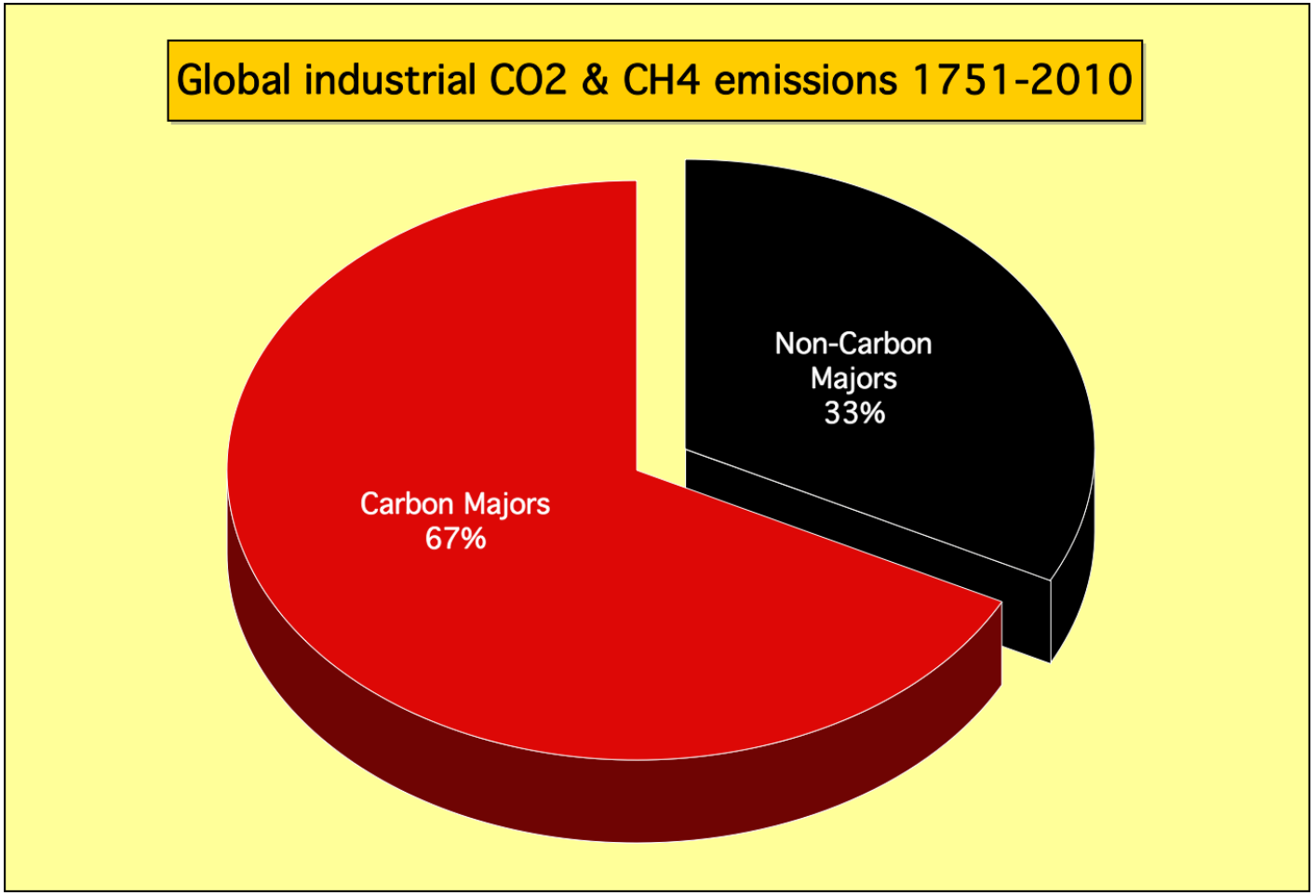
Carbon Majors compared to global fossil fuel & cement CO_2 emissions 1810-2010



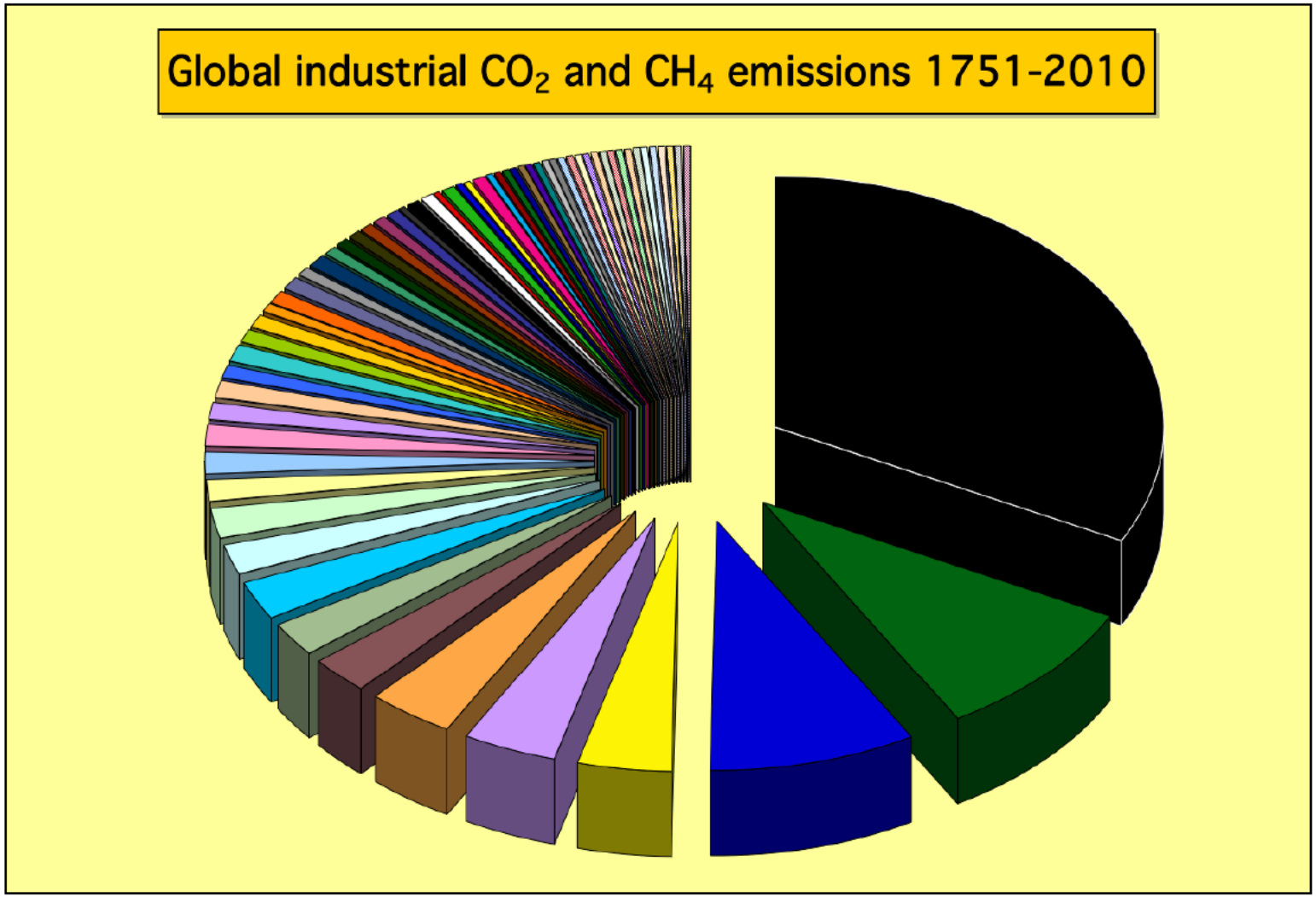
Carbon Majors' oil, gas, coal, cement, and flaring CO_2 emissions 1900-2010

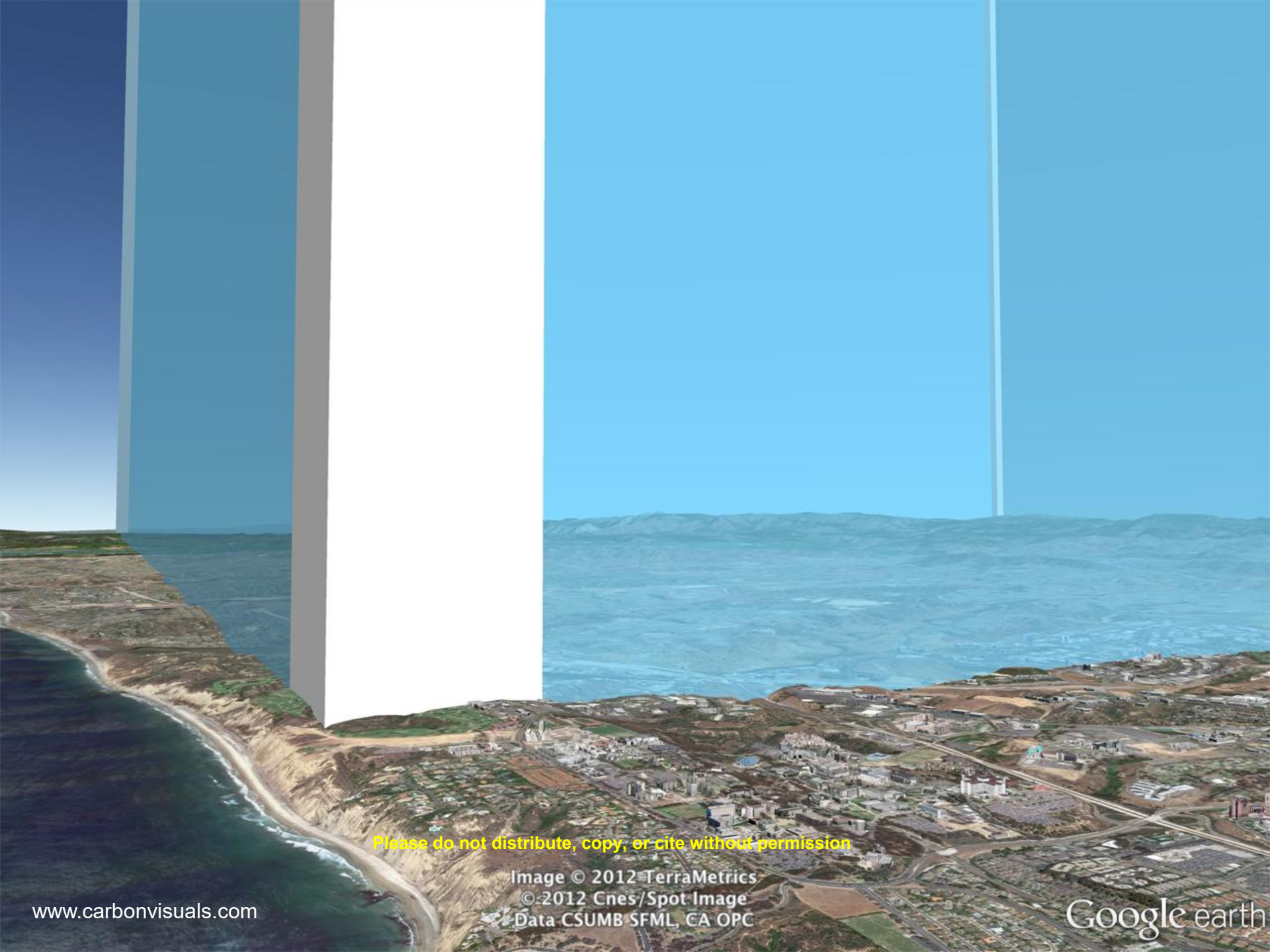


Carbon Majors' cumulative emissions vs global industrial CO_2 emissions not included, 1751-2010



Carbon Majors' cumulative emissions vs global industrial CO_2 emissions not included, 1751-2010

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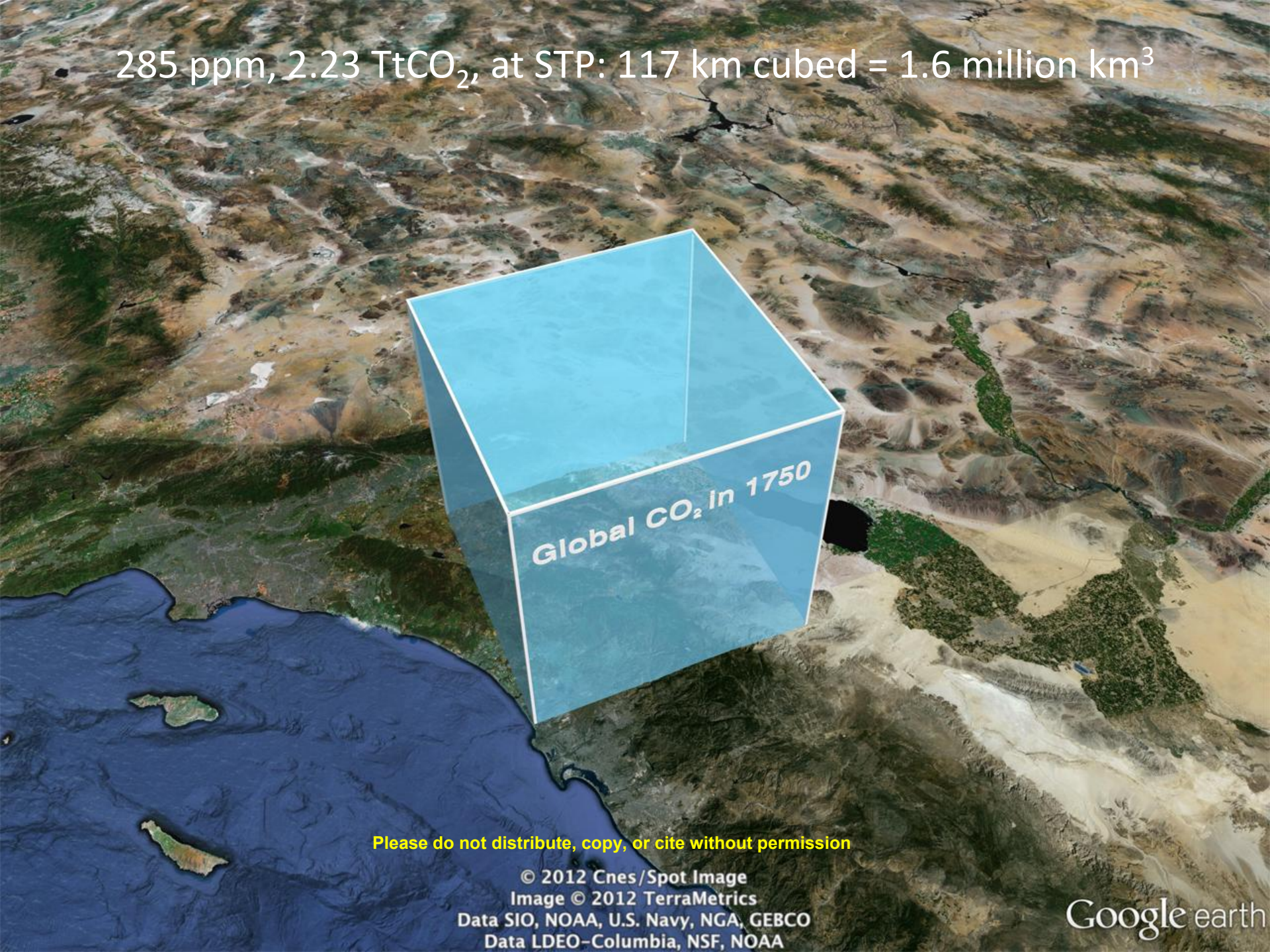
www.carbonvisuals.com
Google earth

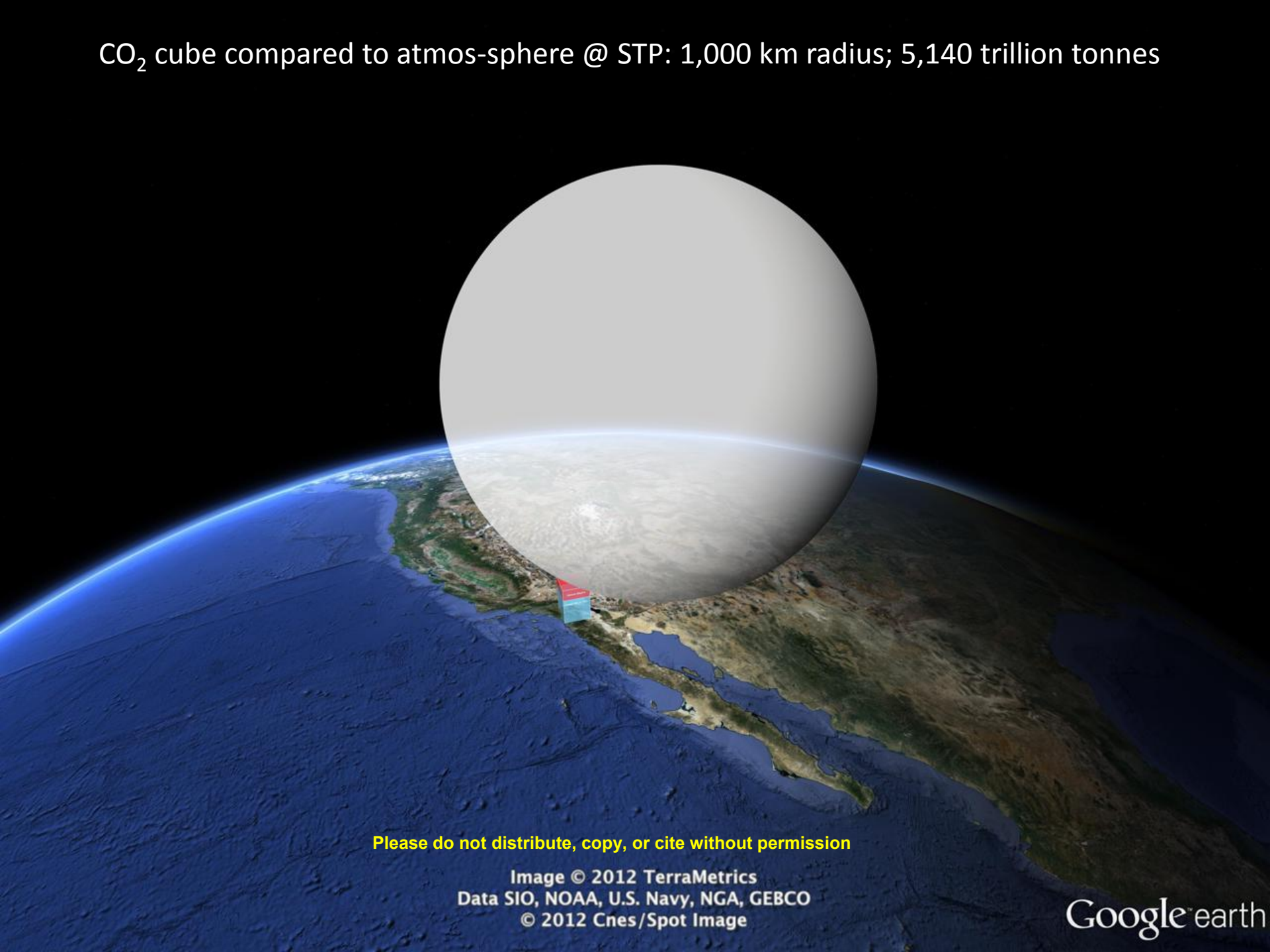

285 ppm, 2.23 TtCO2, at STP: 117 km cubed = 1.6 million km3
Global CO2 In 1750
Please do not distribute, copy, or cite without permission
© 2012 Cnes/Spot Image
Image © 2012 TerraMetrics
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Data LDEO-Columbia, NSF, NOAA
Google earth

Carbon Majors added 904 $GtCO_2$

Non-Carbon Majors added 432 $GtCO_2$


393 ppm, 3.07 TtCO2, at STP = 2.2 million km3
Anthropogenic CO2 in atmosphere now
Global CO2 In 1750
Please do not distribute, copy, or cite without permission
© 2012 Cnes/Spot Image
Image © 2012 TerraMetrics
Data LDEO-Columbia, NSF, NOAA
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Google earth

CO_2 cube compared to atmos-sphere @ STP: 1,000 km radius; 5,140 trillion tonnes



Questions and discussion

- Does attribution of emissions to carbon producers have relevance to
  - climate accountability,
  - public opinion,
  - legal strategies,
  - or policy?
- Leverage points with each, & limitations?
- Flaws in the methodology or objectives?
- Bring selected carbon majors to the table, then what?
- Suggestions for next steps

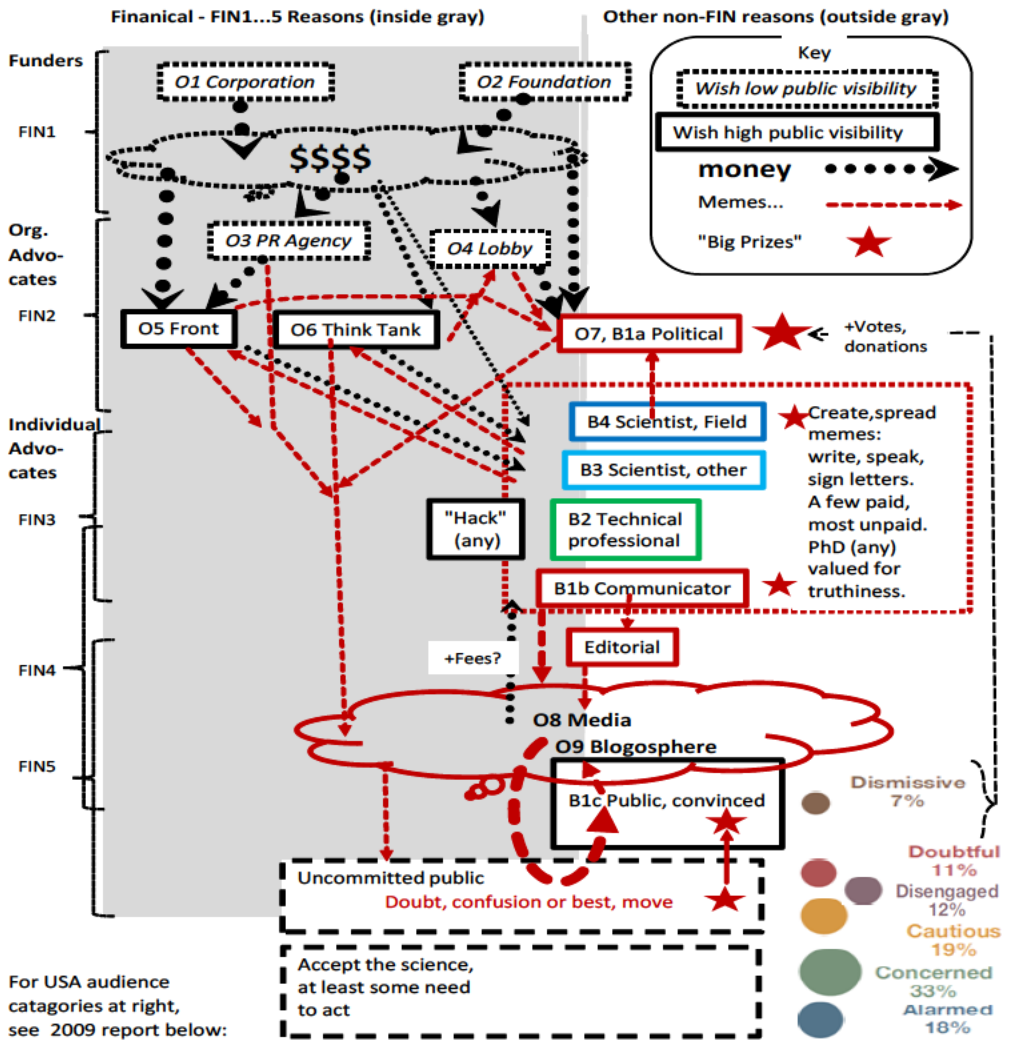
Overview

- **Speaker background**
  - Innocent computer scientist/executive stumbles into an alternate universe: physics does not apply & climate scientists form an evil cabal to hide the truth
- **2007-2009**
  - Helping out, studying the machinery, building model (next page)
- **The machinery – methods, funding, organization, people, geography**
- **Dec 2009-current – an example of the machine's work gets uncovered**
  - "Deep Climate" (DC) finds a small problem with the 2006 Wegman Report … and more and more, and attracts helpers
  - ➔ Misconduct complaints, USA Today articles and more
- **Defogging (or DeSmog ing) the machine, throwing rocks in the gears**
  - Most of the time, when people lie about science, it is not actionable.
  - Academic misconduct complaints, funds mis-use? Misleading Congress?
  - Libel and the Internet (B.C. leads!)
  - Complaints to IRS on 501(c)(3) abuses

The Machinery – Laundering Money and Memes – 1

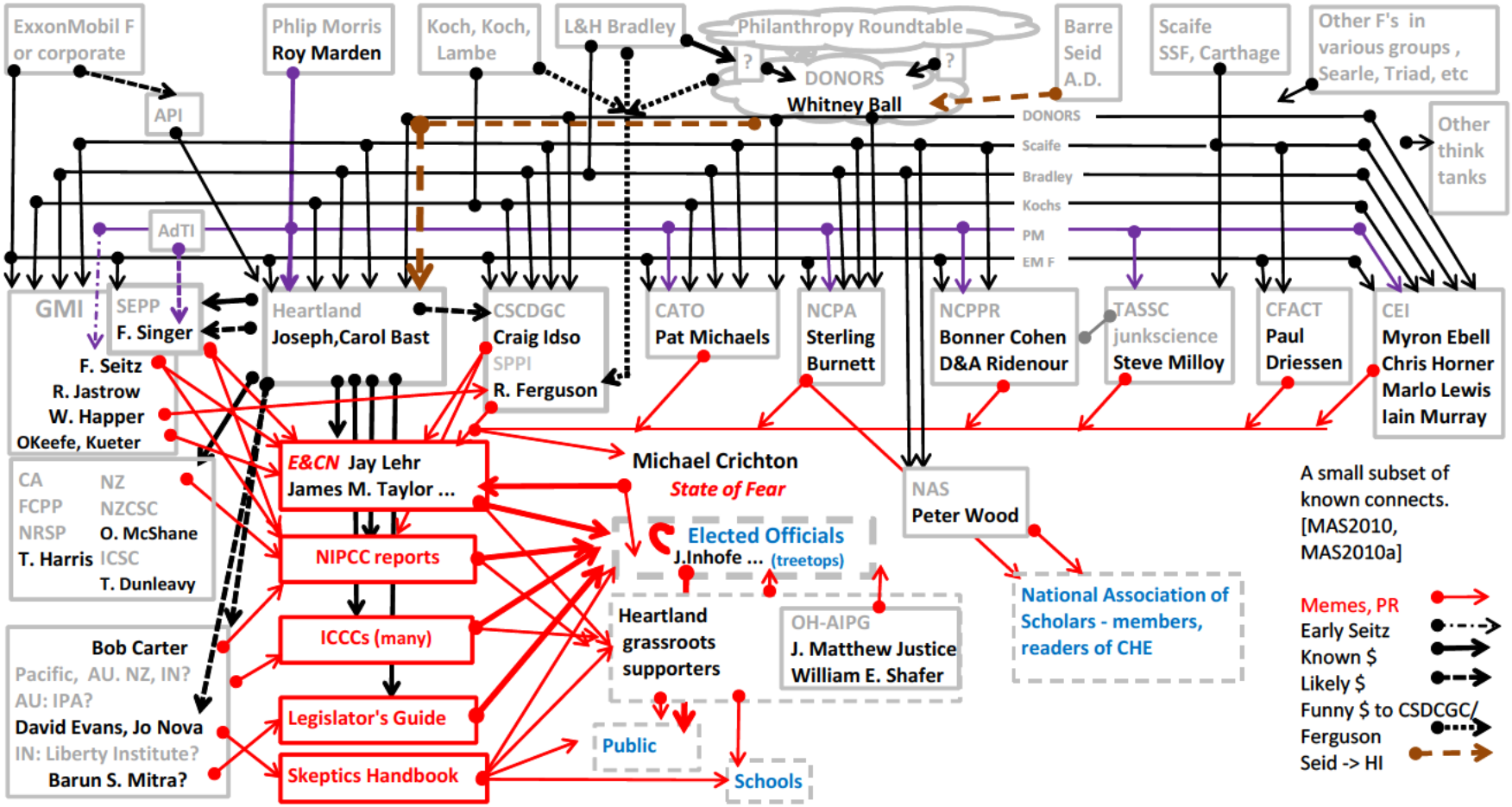
http://www.desmogblog.com/crescendo-climategate-cacophony, March 2010, p.10

- Family foundations & corporations
- Interconnected group of cooperative/competitive nonprofit PR/lobbyists
- Spokespeople
  Some last long
  Others wear out
- Media
  Internet
- Public



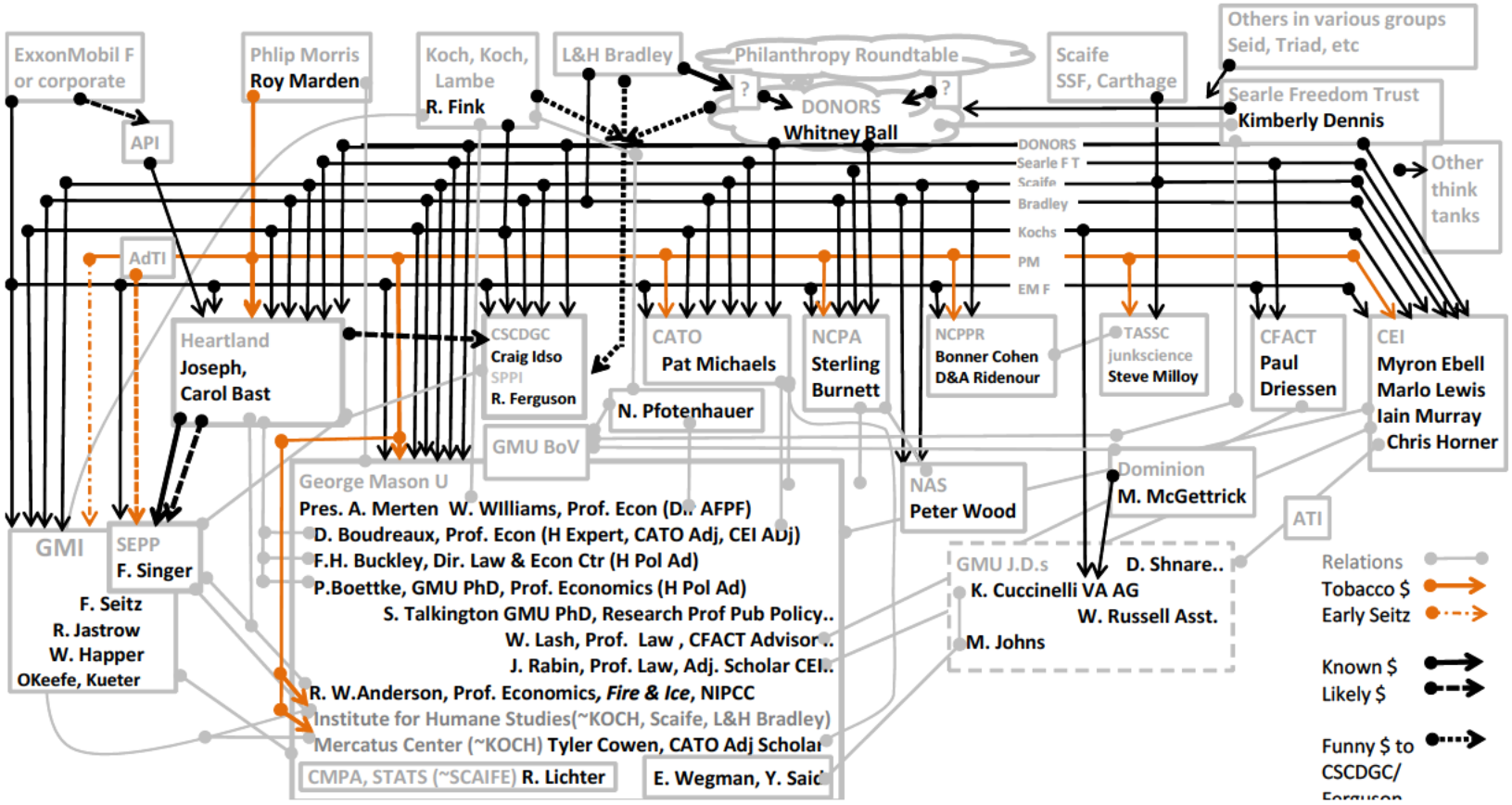
Example 1 – Heartland and Friends

http://www.desmogblog.com/fake-science-fakexperts-funny-finances-free-tax, p.3, updated



Example 2 – George Mason University

http://www.desmogblog.com/see-no-evil-george-mason-university p.40

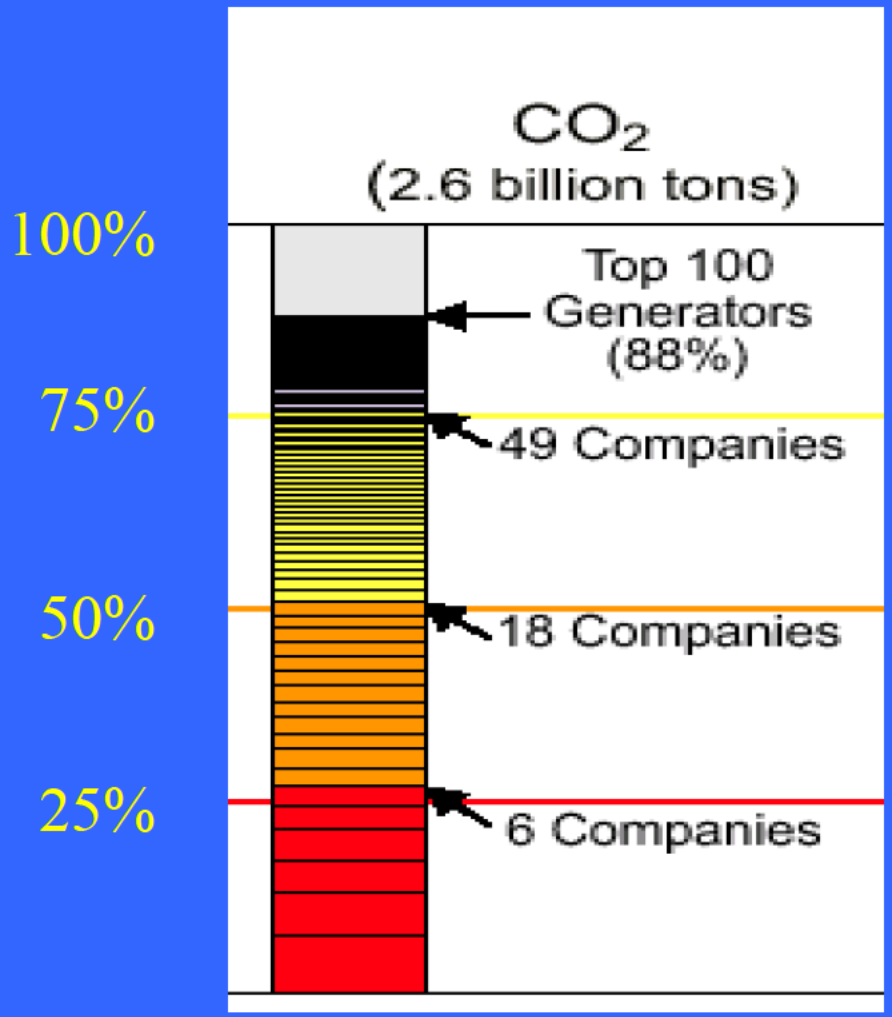


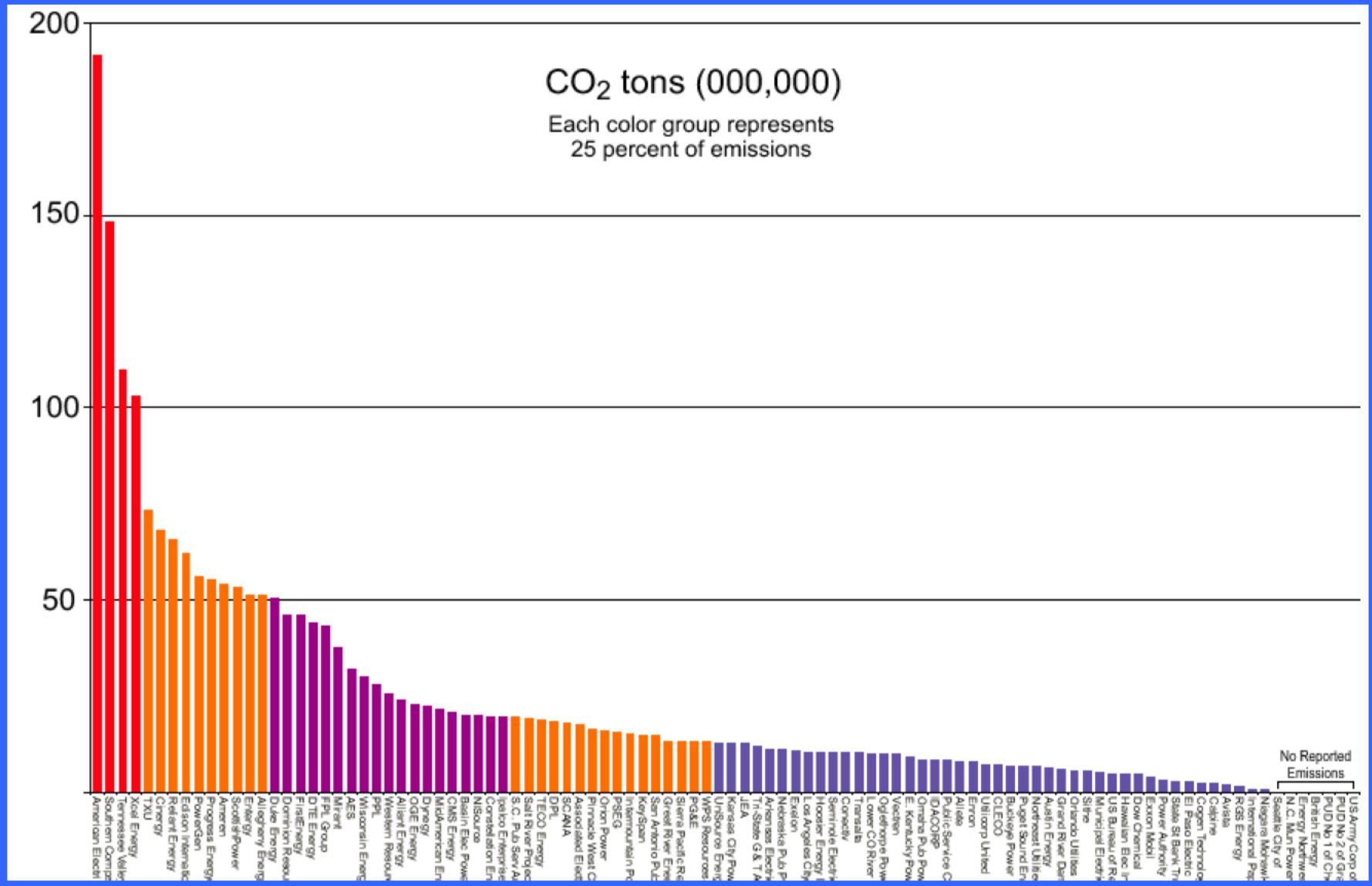
Climate Accountability, Public Opinion and Legal Strategies Workshop

June 14-15, 2012

by Matt Pawa

Individual Companies' Contributions to Total US Power Sector CO_2 Emissions




200
150
100
50
CO_2 tons (000,000)
Each color group represents
25 percent of emissions
No Reported
Emissions

CERES-NRDC

Point One

Multiple Polluters Are Each Liable

Boim v. Holy Land Found. for Relief & Dev., (7th Cir. 2008) (en banc)

Even if the amount of pollution caused by each party would be too slight to warrant a finding that any one of them had created a nuisance . . . pollution of a stream to even a slight extent becomes unreasonable [and therefore a nuisance] when similar pollution by others makes the condition of the stream approach the danger point. The single act itself becomes wrongful because it is done in the context of what others are doing.

Point Two

The Science is Admissible And Convincing

The H[illegible]m K. Sessions (D. Vt.)

"That global warming is taking place as a result of human emissions of carbon dioxide and other greenhouse gases, and that its consequences are likely to be harmful, is widely accepted in the scientific community"

Kivalina v. ExxonMobil

Shishmaref

Kivalina v. ExxonMobil

- monetary damages

- Civil conspiracy

GLOBAL CLIMATE CHANGE SCIENCE -- OVERVIEW OF RECENT DEVELOPMENTS

JOHN KINSMAN
EDISON ELECTRIC INSTITUTE

EEI ENVIRONMENT & ENERGY COMMITTEE
MONTEREY, CALIFORNIA

13 FEBRUARY 1996

SCIENCE -- BASICS

- GREENHOUSE EFFECT IS NATURAL AND BENEFICIAL
- REAL CONCERN IS MAN-INDUCED ENHANCED GREENHOUSE EFFECT
- GHG EMISSIONS AND CONCENTRATIONS ON THE RISE
- GLOBAL MEAN TEMPERATURE UP 0.3-0.6 DEGREES C OVER PAST CENTURY, BUT WITHIN BOUNDS OF NATURAL CLIMATIC VARIABILITY
- GLOBAL MEAN TEMPERATURE INCREASE 1.5-4.5 DEGREES C WITH $2XCO_2$
- AEROSOLS, EL NINO AND VOLCANIC ERUPTIONS IMPORTANT
- MODELS TO PREDICT FUTURE QUITE LIMITED -- HOW MUCH, WHERE AND WHEN KNOWN WITH LITTLE CONFIDENCE
- NO CONFIDENCE PREDICTING REGIONAL CLIMATE CHANGE
- IMPACT STUDIES SCATTERED AND HIGHLY UNCERTAIN

TEMPERATURE AND SEA LEVEL

PREDICTED CHANGE BY 2100 (FROM 1990)

- TEMPERATURE
  - 1.0-3.5 DEGREES C INCREASE (GLOBAL MEAN)
  - BEST ESTIMATE OF 2.0 DEGREES C INCREASE IS 33% LOWER THAN IN 1990 IPCC REPORT
  - IN ALL CASES, THE AVERAGE RATE OF WARMING WOULD PROBABLY BE GREATER THAN ANY SEEN IN PAST 10,000 YEARS
- SEA LEVEL
  - 15-95 CM (AT TIME OF CO_2 DOUBLING/ CONTINUED INCREASE AFTERWARDS)
  - BEST GUESS OF 50 CM IS 25% LOWER THAN IN 1990 IPCC REPORT

PREDICTED ENVIRONMENTAL IMPACTS -- FORESTS AND AGRICULTURE

FORESTS

- WARMING OF 1-3.5 DEGREE C OVER 100 YEARS WOULD BE EQUIVALENT TO A POLEWARD SHIFT OF PRESENT ISOTHERMS BY APPROXIMATELY 150-550 KM (TREE MIGRATION RATES 4-200 KM PER CENTURY)
- NEW ASSEMBLAGES OF SPECIES AND NEW ECOSYSTEMS MAY BE ESTABLISHED
- 1/7 TO 1/3 OF EXISTING FORESTED AREA WILL UNDERGO MAJOR CHANGES IN BROAD VEGETATION TYPES
- FOREST DIEBACK COULD LEAD TO LARGE C RELEASE

AGRICULTURE

- IMPACTS VARY CONSIDERABLY ACROSS REGIONS
- GLOBAL AGRICULTURAL PRODUCTIVITY COULD BE MAINTAINED RELATIVE TO CURRENT LEVELS UNDER 2XCO_2

PREDICTED ENVIRONMENTAL IMPACTS - COASTAL SYSTEMS

- RISE IN SEA LEVEL OR CHANGES IN STORMS/STORM SURGES COULD RESULT IN:
  - EROSION OF SHORES
  - INCREASED SALINITY OF ESTUARIES AND FRESHWATER AQUIFERS
  - INCREASED COASTAL FLOODING
  - ECOLOGICAL IMPACTS
- 50 CM SEA LEVEL RISE WOULD INCREASE FROM 46 TO 92 MILLION THE NUMBER OF PEOPLE PER YEAR AT RISK OF FLOODING DUE TO STORM SURGES
- ESTIMATED LAND LOSSES AS HIGH AS 80%

PREDICTED ENVIRONMENTAL IMPACTS - HYDROLOGICAL SYSTEMS

- MORE SEVERE FLOODS AND DROUGHTS IN SOME PLACES AND LESS SEVERE IN OTHERS
- CHANGES IN RUNOFF, QUANTITY AND QUALITY OF WATER SUPPLIES

PREDICTED ENVIRONMENTAL IMPACTS - HEALTH

- MOSTLY ADVERSE IMPACTS, WITH SIGNIFICANT LOSS OF LIFE DUE TO:
  - HEAT WAVES
  - VECTOR-BORNE INFECTIOUS DISEASE SUCH AS MALARIA, DENGUE, YELLOW FEVER
  - RESPIRATORY AND ALLERGIC DISORDERS
  - DECLINE IN NUTRITIONAL STATUS
  - LIMITATIONS ON FRESHWATER SUPPLIES
- 3-5 DEGREE C LEAD TO 10% INCREASE MALARIA (50-80 MILLION NEW CASES)
- QUANTIFYING THE POTENTIAL IMPACTS IS DIFFICULT DUE TO VARYING CIRCUMSTANCES SUCH AS NUTRITION, WEALTH, ACCESS TO QUALITY HEALTH SERVICES

IMPACTS - WELFARE

- IMPACTS EXPECTED FOR:
  - ENERGY
  - INDUSTRY
  - TOURISM
  - TRANSPORTATION INFRASTRUCTURE
  - HUMAN SETTLEMENTS
  - INSURANCE
  - CULTURAL SYSTEMS AND VALUES
- AMONG SECTORS AND ACTIVITIES STATED TO BE MOST SENSITIVE ARE:
  - ENERGY DEMAND
  - PRODUCTION OF RENEWABLE ENERGY SUCH AS HYDROELECTRICITY AND BIOMASS

VULNERABILITY

- SOME COMMUNITIES MORE VULNERABLE BECAUSE OF INCREASING POPULATION DENSITY IN SENSITIVE AREAS
- DEVELOPING COUNTRIES, WHERE ECONOMIC AND INSTITUTIONAL CIRCUMSTANCES ARE LESS FAVORABLE, TYPICALLY MORE VULNERABLE
- QUANTITY AND QUALITY OF WATER SUPPLIES IS ALREADY A SERIOUS PROBLEM IN MANY REGIONS
- MANY OF THE WORLD'S POOREST PEOPLE POTENTIALLY MOST AT RISK OF WORSENING AGRICULTURAL SITUATIONS
- FRAGMENTED LANDSCAPES CAN INCREASE THE VULNERABILITY OF LIGHTLY-MANAGED AND UNMANAGED ECOSYSTEMS
- ADAPTATION OPTIONS FOR MANAGED SYSTEMS AVAILABLE BUT LESS SO FOR MANY REGIONS DUE TO HIGH COST OR LIMITED ACCESS TO TECHNOLOGIES AND INFORMATION

CLIMATE EXTREMES -- MORE FREQUENT/VIGOROUS STORMS NOW?

- REGARDING THE *FUTURE*:
  - PROSPECTS FOR MORE SEVERE FLOODS AND DROUGHTS IN SOME PLACES AND LESS SEVERE IN OTHERS
  - THE RELIABILITY OF REGIONAL-SCALE PREDICTION IS LOW AND THE DEGREE TO WHICH CLIMATE VARIABILITY MAY CHANGE IS UNCERTAIN

AIAM
The World's Leading Automakers®

TECH-96-29
1/18/96

TO: AIAM Technical Committee

FROM: Gregory J. Dana
Vice President and Technical Director

RE: **GLOBAL CLIMATE COALITION (GCC) - Primer on Climate Change Science - Final Draft**

Enclosed is a primer on global climate change science developed by the GCC. If any members have any comments on this or other GCC documents that are mailed out, please provide me with your comments to forward to the GCC.

GJD:ljf

APPROVAL DRAFT

Are There Alternate Explanations for the Climate Change Which Has Occurred Over the Last 120 Years?

Several arguments have been put forward attempting to challenge the conventional view of greenhouse gas-induced climate change. These are generally referred to as "contrarian" theories. This section summarizes these theories and the counter-arguments presented against them.

Solar Variability

Contrarian Theory

Solar radiation is the driver for the climate system. Any change in the intensity of the solar radiation reaching the Earth will affect temperature and other climate parameters. Dr Robert Jastrow, Director of the Mt. Wilson Observatory, and others have shown a close correlation between various sun spot parameters, which they believe are a measure of solar intensity, and global average temperature for the past 120 years,

Counter-arguments

Direct measures of the intensity of solar radiation over the past 15 years indicate a maximum variability of less than 0.1%, sufficient to account for no more than 0.1°C temperature change. This period of direct measurement included one complete 11 year sun spot cycle, which allowed the development of a correlation between solar intensity and the fraction of the Sun's surface covered by sun spots. Applying this correlation to

average temperature for the past 120 years, the period for which reasonable quality data exist for both sun spots and global average temperature. The correlation has been pushed back to about 1700 using less accurate data for both temperature and sun spots. In addition, observations of Sun- like stars indicate that they show the amount of variability in radiation intensity needed to account for recent changes in the Earth's climate.

More recently, Tinsley and Heelis at the Univ. of Texas have proposed a mechanism by which changes in solar activity can impact on climate in by a mechanism other than the direct change in the intensity of solar radiation impacting on the Earth's

by sun spots. Applying this correlation to sun spot data for the past 120 years indicates a maximum variability on solar intensity of 0.1%, corresponding to a maximum temperature change of 0.1°C, one-fifth of the temperature change observed during that period.

If solar variability has accounted for 0.1°C temperature increase in the last 120 years, it is an interesting finding, but it does not allay concerns about future warming which could result from greenhouse gas emissions. Whatever contribution solar variability makes to climate change should be additive to the effect of greenhouse gas emissions.

The Tinsley and Heelis proposed mechanism may revive the debate about the role of solar

APPROVAL DRAFT

Role of Water Vapor

Contrarian Theory

In 1990, Prof. Richard Lindzen of MIT argued that the models which were being used to predict greenhouse warming were incorrect because they predicted an increase in water vapor at all levels of the troposphere. Since water vapor is a greenhouse gas, the models predict warming at all levels of the troposphere. However, warming should create convective turbulence, which would lead to more condensation of water vapor (i.e. more rain) and both drying and cooling of the troposphere above 5 km. This negative feedback would act as a "thermostat" keeping temperatures from rising significantly.

Counter-arguments

Lindzen's 1990 theory predicted that warmer conditions at the surface would lead to cooler, drier conditions at the top of the troposphere. Studies of the behavior of the troposphere in the tropics fail to find the cooling and drying Lindzen predicted. More recent publications have indicated the possibility that Lindzen's hypothesis may be correct, but the evidence is still weak. While Lindzen remains a critic of climate modeling efforts, his latest publications do not include the convective turbulence argument.

Satellite measurements covering over 98% of the globe indicate that global average temperature has decreased slightly over the past 15 years, during a time when land-based temperature measurements indicated a series of record high temperatures.

Satellites measure the average temperature of a column of air from the surface to about 6 km. above the surface, while the land-based measurements are surface measurements. Also, the land-based measurements are for land only. The oceans, which cover 70% of the Earth's surface, are not included. The oceans would be expected to warm more slowly than the land surface, lowering global average temperature.

While raw data from the satellite measurements indicate a cooling of 0.06°C/decade, correcting the raw data for known effects (volcanos and periodic warming of the Eastern tropical Pacific Ocean as part of the El Nino cycle), yields 0.09°C/decade warming. The corrected satellite measurements still do not agree with the land-based temperature record, but they both show warming.

Detailed temperature records do not agree with predictions about greenhouse warming. Prof. Patrick Michaels of the University of Virginia presented a series of hypotheses about how greenhouse warming should affect temperature. Only two will be discussed in detail.

First, if greenhouse gases were responsible for the increase in global average temperature, one would expect daytime maximum temperatures to increase. What is actually happening is that daytime maximum temperatures are staying constant, while nighttime temperatures are increasing. Michaels argues that the increase in nighttime temperatures is due to the urban heat island

While some scientist argue that greenhouse warming has already occurred, most say that it cannot be separated from all of the other factors affecting climate, including the urban heat island effect and aerosol cooling. Thus, the fact that the recent temperature record does not agree in detail with a greenhouse gas warming scenario does not diminish the potential threat from substantially higher atmospheric concentrations of greenhouse gases.

Conclusions about the Contrarian Theories

The contrarian theories raise interesting questions about our total understanding of climate processes, but they do not offer convincing arguments against the conventional model of greenhouse gas emission-induced climate change. Jastrow's hypothesis about the role of solar variability and Michaels' questions about the temperature record are not convincing arguments against any conclusion that we are currently experiencing warming as the result of greenhouse gas emissions. However, neither solar variability nor anomalies in the temperature record offer a mechanism for off-setting the much larger rise in temperature which might occur if the atmospheric concentration of greenhouse gases were to double or quadruple.

Lindzen's hypothesis that any warming would create more rain which would cool and dry the upper troposphere did offer a mechanism for balancing the effect of increased greenhouse gases. However, the data supporting this hypothesis is weak, and even Lindzen has stopped presenting it as an alternative to the conventional model of climate change.

primer1.wp6

TECH-96-138
2/27/96

TO: AIAM Technical Committee

FROM: Gregory J. Dana
Vice President and Technical Director

RE: **GLOBAL CLIMATE COALITION (GCC) - Science and Technology Assessment Committee (STAC) Meeting - February 15, 1996 - Summary**

On February 15, 1996, the Science and Technology Assessment Committee (STAC) of the Global Climate Coalition (GCC) met. Enclosed is an agenda, minutes of the last meeting of January 18, 1996, a draft primer on predicting climate change, a draft GCC statement in support of research, an order form for publications, and a copy of a presentation on climate change by EEI. Also enclosed is a brief summary of the meeting.

3. **Draft Paper on State Of Science - The STAC next took up the draft paper on the State Of The Science paper that has been developed by Lenny Bernstein. Lenny indicated that so far general comments had been constructive on the first portion of the paper. Most suggestions had been to drop the "contrarian" part. This idea was accepted and that portion of the paper will be dropped. The ideas brought out in the "contrarian" section may be dealt with in a future paper.**

Attribution of Climate Impacts

Workshop on Climate Accountability, Public Opinion, and Legal Strategies

Scripps Institution of Oceanography, La Jolla, California

14-15 June 2012

Claudia Tebaldi, Climate Central

ipcc
INTERGOVERNMENTAL PANEL ON climate change

Working Group I (WG I) – The Physical Science Basis

IPCC Expert Meeting on Detection and Attribution Related to Anthropogenic Climate Change

The World Meteorological Organization
Geneva, Switzerland
14-16 September 2009

Good Practice Guidance Paper on Detection and Attribution Related to Anthropogenic Climate Change

Core Writing Team:
Gabriele C. Hegerl (United Kingdom), Ove Hoegh-Guldberg (Australia),
Gino Casassa (Chile), Martin Hoerling (USA), Sari Kovats (United Kingdom),
Camille Parmesan (USA), David Pierce (USA), Peter Stott (United Kingdom)

Edited by:
Thomas Stocker, Christopher Field, Qin Dahe, Vicente Barros,
Gian-Kasper Plattner, Melinda Tignor, Pauline Midgley, Kristie Ebi

The Good Practice Guidance Paper is the agreed product of the IPCC Expert Meeting on Detection and Attribution Related to Anthropogenic Climate Change and is part of the Meeting Report.

This meeting was agreed in advance as part of the IPCC workplan, but this does not imply working group or panel endorsement or approval of the proceedings or any recommendations or conclusions contained herein.

Supporting material prepared for consideration by the Intergovernmental Panel on Climate Change.
This material has not been subjected to formal IPCC review processes.

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WMO UNEP

What makes attribution of impacts even more challenging than that of the physical climate system ?

- **Confounding factors** – complexity and multi-faceted causes of change make modeling (dynamical or statistical) hard. Often the main signal is other than anthropogenic climate change.

- **Adaptation** – both natural and human system have adapted concurrently with the changes in the climate driver

- **Spatial scale** – impacts are local, while the scale of formally attributed changes in the climate system is barely sub-continental at best (more often, global or continental).

Methods

- **Single-step attribution**: End-to-end modeling (could involve more than one model) of change in impacted system as a function of a change in external forcings and other drivers (E.g. Area burnt by forest fires in Canada).

- **Multi-step attribution**: Two separate attribution linkages are drawn, one between the impacted system and a variable of the climate/environment that has changed; one between the latter and external forcings (and possibly additional drivers) (E.g. Coral reefs and increased CO_2).

- **Associative pattern attribution**: Uses measures of spatial and temporal correlation between large scale climate changes attributed to external forcings and an ensemble of results that are distributed over space coherently with the climate change pattern (Rosenzweig et al., IPCC 2007)

- **Attribution to a change in climatic conditions**: based on process knowledge an assessment is made that the change in the variable/system of interest is consistent with climatic changes.

Attributed impacts (AR4-WG2 report)

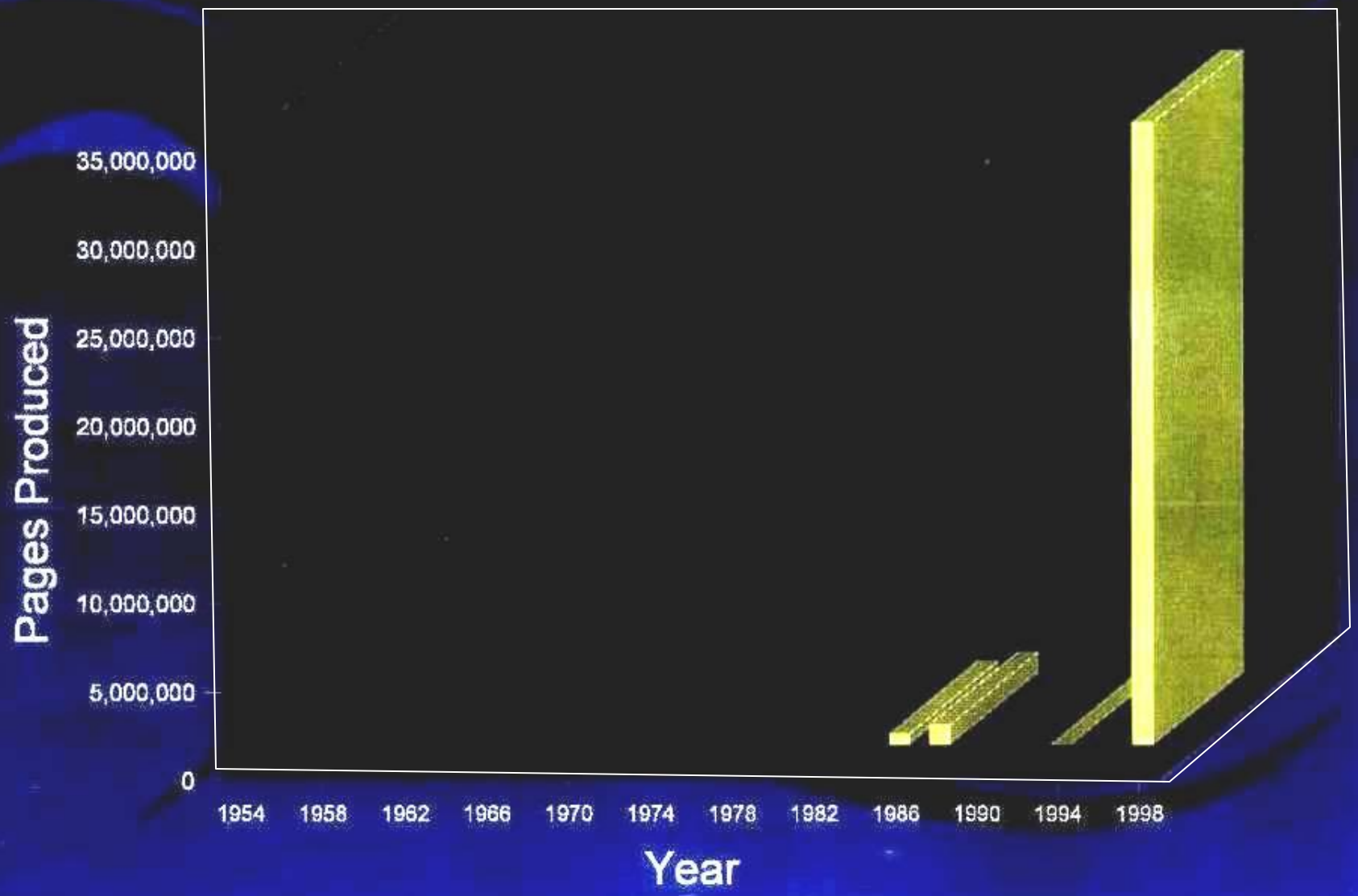
Changes in regional climate, esp. warming, affects many natural systems, in each continent and most oceans (observational evidence)

- Changing snow/ice/frozen ground affect increase in **number and extension of glacial lakes, increase in avalanches and instability of permafrost, and changes in polar ecosystems**.
- Warmer temperatures **increase runoff and anticipate snowmelt in spring**; **increase temperatures in lakes and rivers**.
- Warmer temperatures affect **terrestrial biological systems** with earlier timing of spring event (foliage, migrations and egg- laying) and range shifts (poleward and upward).
- Rising water temperatures/changes in ice cover, salinity, oxygen levels and circulation affect **ranges of algae/plankton/ fish abundance in high latitude oceans and high latitude/high elevation lakes**.
- **Ocean acidification** is occurring because of increase uptake of CO_2 but effects on ocean life are undocumented yet.

Problematic still

- Agricultural production/Food prices/Food security
- Human Health – Heat/Cold/Pollution/Allergies/Vector borne diseases
- Damages from extreme events – Tornadoes/Hurricanes/Floods
- Small Islands' vulnerabilities are still overwhelmingly due to other environmental degradation factors than anthropogenic global warming/sea level rise.

Tobacco Document Production



L U N G C A N C E R -

SMOKING STUDIES

By

ALAN ROCOMAN

September, 1955

(133)

TSC 21

Plfs Exhibit 3508
Date 9-5-97
Judy A. Steinke
Shorthand Reporter

REPORT ON VISIT TO U.S.A. AND CANADA

17th APRIL - 12th MAY 1958

by

H. R. HENTLEY

D.G.I. FELTON

W. W. REID

105408490

WHAT THE GLOBE NEEDS

- GLOBAL CARBON REDUCTION TO ACHIEVE 350 PPM
- ANNUAL GLOBAL REDUCTION OF 6% BEGINNING 2013 *(Hansen et. al)*
- MASSIVE REFORESTATION/SOIL SEQUESTRATION – 100 GTC NATURAL DRAWDOWN
- Has to be international/ has to be related to the carbon math

CONVENTIONAL APPROACHES

- International treaty processes
  -- negotiation frame not effective
  -- fossil fuel corporation capture
  -- no enforcement capability on global scale

- Domestic Regulation
  - Politicized/ no action yet after Mass v. EPA
  - Fragmented

- Domestic Legislation (failed)
  - Political capture

The Public Trust Doctrine

"It's legal DNA" – Prof. Gerald Torres

FRAME CHANGE

- Crucial natural resources owned by public; government acts as trustee - dates back to Roman times
- Beneficiaries are citizens – present and future generations
- Duty to protect and not waste the resource (obligation, not discretion)
- Internationally recognized (Blumm – almost a matter of customary law)
- International application - common assets by sovereigns around the world acting as co-tenant trustees

Atmospheric Trust Litigation (ATL) Around the World

- Global strategy based on Public Trust
- Macro-level strategy tied to **scientific prescription** (timing/urgency)
- Linked to youth climate movement (world-wide marches)
- Press Strategy

The ATL suit

- **Defendants**: government trustees
- **Plaintiffs**: youth representing present and future generations
- **Fiduciary obligation** – Hansen prescription 6% reduction beginning 2013 (+ sequestration through soil and reforestation)
- **Remedy** – plan and continuing jurisdiction (not damages)
- **Consent decrees** (would be ideal)

ATL Hatch – *Our Children's Trust*

- **Domestic litigation**
  - Hatch of 50 petitions and cases in every state in US in May, 2011
  - 9 original state suits – more coming
  - 1 federal (dismissed on preemption, but to be appealed)
  - Imatter marches across U.S.
  - Amicus briefs (U.S. law professors, Dr. Hansen, religious organizations)
- **International litigation** (domestic in countries world-wide)
  - Ukraine favorable decision
  - Marches in countries around world
- **Documentaries** (**stories** of youth plaintiffs)
  - *You win even if you loose*
  - *Litigation as **platform for youth** leadership and voice*
  - *Put face on the **risk** and bring future into the present*
  - *Bring to light **local impacts***
  - *Focus at lifestyle – **benefits part of equation***
  - *Voice comes from the **community and has appeal** (kids coming home)*

Broader ATL approach

- **Beneficiary claims** (underway)
- **Co-trustee claims** (states or tribes suing other states, or fed. government)
- **Natural resource damages against corporations**
  - Brought by states, tribes, fed. government
  - Could fund massive restoration
  - Race to head of the line?

From: **Alison Kruger** [redacted]
Subject: RE: follow up email list?
Date: July 3, 2012 at 8:56 AM
To: Mary Wood mwood@uoregon.edu

AK

Hi Mims,

Thanks for your message – I greatly appreciated the opportunity to help bring such a committed group together and am glad you enjoyed the workshop.

I just sent out the contact list, and encourage you to reach out and update folks about the important developments in the TX and NM ATL cases.

Let me know (prior to July 12) as there is other information that might be useful. Thanks again for making it out to La Jolla.

Hope all is well, or at least stable for the time being.

Best,
Alison

From: Mary Wood [mailto:mwood@uoregon.edu]
Sent: Sunday, July 01, 2012 10:54 PM
To: Alison Kruger
Subject: follow up email list?

hi Alison - I greatly enjoyed the workshop and want to thank you for all of your hard work in organizing it. Also, I wanted to know if there was some sort of contact list that came out of the workshop so that we can keep in contact with the others. There have been two great developments in ATL cases that I wanted the group to know about. In Texas a judge ruled that atmosphere is indeed a public trust asset, and in New Mexico a judge ruled that the ATL case can move forward (denied a motion to dismiss). These are really important developments.

Thanks again for a great workshop. Mims

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From: mp@pawalaw.com
Subject: Global Warming Legal Action Project
Date: August 1, 2012 at 6:37 AM
To: Mary Wood mwood@law.uoregon.edu

Dear Friends of the Global Warming Legal Action Project -

We here at the Global Warming Legal Action project have not been idle during this summer of frightening global warming weather. Here is an update on some of the work we have been doing lately. We have recently taken on some exciting new cases and will be appearing on the PBS show Need to Know on August 10.

Low Carbon Fuels Standard. We recently joined the battle over California's Low Carbon Fuel Standard ("LCFS"). The LCFS is a critically important part of implementing California's pioneering 2006 Global Warming Solutions Act (AB 32) and will significantly reduce the carbon intensity of transportation fuels. Beginning in 2011, the LCFS sets a declining annual carbon-intensity standard that reaches 10 percent by 2020. It applies to most transportation fuels sold in California and it allows regulated parties to comply by using lower carbon-intensity fuels or purchasing credits from other parties. The LCFS is designed to reduce annual GHG emissions from transportation by about 16 million metric tons by 2020, even as the population and demand for transportation increase substantially. The LCFS will, by itself, produce about ten percent of the emissions reductions necessary to satisfy AB 32's requirement to reduce emissions to 1990 levels by 2020.

As with California's tailpipe emission standards, other states are following California's lead. Oregon has enacted an LCFS, which is under regulatory development, and ten Northeast and Mid-Atlantic states (Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Pennsylvania, Rhode Island and Vermont) are also moving toward a regional LCFS based on the California law. In December 2009, their respective governors signed a memorandum of understanding on to develop an agreed-upon framework for the program to be followed by a model rule. The validity of all these other states' laws will depend upon the validity of the California law.

However, the ethanol and oil industries have sued California over the LCFS in federal court and contended that the law violates the U.S. Constitution's Commerce Clause. Three environmental groups (Environmental Defense, Natural Resource Defense Council, and Sierra Club) intervened alongside California and have had a major role in defending the LCFS.
Unfortunately, in December, 2011, the federal trial court held that the LCFS violates the Commerce Clause in its treatment of Midwest ethanol and in its treatment of crude oil. The district court found that the LCFS life-cycle analysis unlawfully discriminates against Midwest ethanol by (accurately) accounting for the higher carbon emissions associated with (1) electricity used to manufacture the ethanol and (2) transporting it from the Midwest to California, with similar conclusions about crude oil.

The district court decision is now on appeal to the U.S. Court of Appeals for the Ninth Circuit. The Global Warming Legal Action Project now represents the Sierra Club in this important, precedent-setting appeal. We have associated with attorney David Bookbinder, formerly Sierra Club's Chief Climate Counsel and now in private practice, who is working closely with the California Department of Justice to craft a legal theory on appeal that will maximize the chances of reversing the district court's ruling. Our involvement allows for a coordination of legal strategy across states that would not otherwise occur. And the legal theory we are implementing on appeal will bring all fifty states' authority into the analysis and provide a firm basis for the appellate court to uphold the law. Our opening brief was filed on June 8. The industry's brief will be filed this week and our reply brief will be filed within the next month.

North Dakota v. Swanson. In 2007, Minnesota passed the Next Generation Energy Act ("NGEA"), which bans (a) building new fossil fuel power plants (both coal and gas) within the state, (b) importing power from such new fossil fuel plants outside the state, and (c) new baseload power contracts that would increase GHG emissions from power generated within and imported into the State (although it does not say what the applicable baseline is or how it should be determined). The Act excepts gas-fired

peaker plants from the first two of these bans, and includes five project-specific exemptions as well, two of which are out of state. (There is only one power plant among the three in-state exemptions; the other two are a steel mill and an "iron nugget production facility".)

On November 2, 2011, the state of North Dakota and a variety of national and regional coal interests sued Minnesota over the Act. The gist of the complaint is that the bans on importing power from (a) new fossil fuel plants and (b) existing fossil fuel plants where doing so would increase GHG emissions violate the Commerce Clause both facially and by unduly burdening interstate commerce.

Industry's main argument is that "the purported local benefits of the NGEA are insignificant and illusory because it exempts at least five new large energy facilities located in Minnesota and/or owned by Minnesota-based entities", that "NGEA will have no appreciable effect in meeting or advancing the NGEA's stated goal of 'reduc[ing] statewide greenhouse gas emissions across all sectors . . . to a level at least 15 percent below 2005 levels by 2015, to a level at least 30 percent below 2005 levels by 2025, and to a level at least 80 percent below 2005 levels by 2050'", and "thus the NGEA is not justified by valid public welfare, consumer protection, or procompetitive purpose unrelated to economic protectionism."

We will be representing the Sierra Club as an intervenor in this case to assist Minnesota with the Commerce Clause claims, especially discovery and trial on the factual issues concerning global warming and the efficacy of the NGEA. This case is important not only for the Minnesota statute, but also for similar laws in two other states, California (S.B. 1368) and Oregon (S.B. 101). Unfortunately those states will not intervene or otherwise get involved as states are extremely reluctant to choose sides in cases, like this, where one state is suing another. Thus the environmental groups will again serve (as we did in the clean cars cases) as the common link among the states.

Investigation of Carbon Bubble Claims. We have been carefully looking into the question of whether there are legal claims based upon the carbon bubble, i.e., the fossil fuel companies' statement of the their proven fossil fuel reserves which, in fact, cannot be burned without destroying the planet. http://www.thenation.com/article/166108/great-carbon-bubble More on that as we move forward . . . .

PBS Need to Know. Yours truly was interviewed this week by this program regarding the petition to the International Court of Justice by Palau, which seeks an advisory opinion by the world court on whether massive emissions of greenhouse gases that threaten to destroy the territorial sovereignty of a small island state like Palau, violates international legal obligations. The program will air August 10th.

Best to all,

Matt

This message has been sent via an announcement listserv. Your replies will go to me only. To be removed from the list, just send me a reply requesting to be removed.

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From: **Kevin Knobloch** [redacted]
Subject: Invitation to attend UCS Center for Science and Democracy launch
Date: May 24, 2012 at 4:58 AM
To: Kevin Knobloch [redacted]

KK

Hope you can make it!

Please RSVP at: http://labsofdemocracy.eventbrite.com/

President **Kevin Knobloch** and Board Chair **James McCarthy** invite you to join the Union of Concerned Scientists in celebrating the launch of the

Center for Science *and* Democracy

Laboratories of Democracy: Science as a Catalyst for Change

Wednesday, June 13, 2012 :: 4:00-7:00 p.m., PDT

Robert Paine Scripps Forum for Science, Society and the Environment
Scripps Institution of Oceanography, 8610 Kennel Way, La Jolla, CA

Welcoming remarks by **Veerabhadran Ramanathan**, Victor C. Alderson Professor of Applied Ocean Sciences and Director, Center for Atmospheric Sciences, Scripps Institution of Oceanography

Introduction to the Center for Science and Democracy by UCS President **Kevin Knobloch**

Celebration of **Lewis M. Branscomb** (distinguished research fellow, Institute of Global Conflict and Cooperation, University of California, San Diego, and Aetna Professor of Public Policy and Corporate Management, emeritus, John F. Kennedy School of Government, Harvard University) for his leadership, inspiration and guiding vision by UCS Board Chair **James McCarthy**

Conversation moderated by **K.C. Cole**, Professor, Annenberg School of Journalism, University of Southern California, with distinguished guests:

- **David Baltimore**, President Emeritus and Robert Andrews Millikan Professor of Biology, California Institute of Technology
- **Mary D. Nichols**, Chair, California Air Resources Board
- **Naomi Oreskes**, Professor of History and Science Studies, University of California at San Diego
- **John E. Porter**, Chair, Research!America and former U.S. Representative (R-IL)

Closing remarks by **Peter Frumhoff**, UCS Director of Science & Policy

Reception with hors d'oeuvres to follow.

Host Committee:

Richard Atkinson
Lewis Branscomb
Bob Epstein
Rep. Bob Filner
Assm. Nathan Fletc
Daniel Goldin
Andrew Gunther
Sen. Christine Kehc
Charles Kennel
Sanford Lakoff
Mario Molina
Louis Salkind
Nancy Stephens
Daniel Yankelovich
Emily Young

RSVP TODAY!
Seating is limite

*The **Center for Science and Democracy** is a bold new initiative of the Union of Concerned Scientists to strengthen the American democracy by restoring the essential role of science, evidence-based decision making a constructive debate as a means to improve the health, security, and prosperity of all Americans.*

If you have any questions about the event, contact Pallavi Phartiyal at pphartiyal@ucsusa.org or 617-301-8039.

Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

The Union of Concerned Scientists is the leading science-based nonprofit working for a healthy environment and a safer world.

HEADQUARTERS: Two Brattle Square; Cambridge, MA 02138; 617-547-5552; www.ucsusa.org
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-

Kevin Knobloch
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From: [redacted]
Subject: K valina - En Banc Petition Filed
Date: October 5, 2012 at 8:09 AM
To: Mary Wood mwood@law.uoregon.edu

Dear Friends of the Global Warming Legal Action Project -

Yesterday in the *Kivalina* case we filed the attached Petition for Rehearing En Banc with the US Court of Appeals for the Ninth Circuit in San Francisco. We don't intend to go down without a fight. And it isn't over till it's over.

Procedure: Any of the judges of the Ninth Circuit may call for rehearing of the case en banc. If none of the judges want to rehear it en banc, we will know within a month and then our only option would be to ask the Supreme Court to take the case. If one or more judges wants to hear it en banc, then the 28 active judges (ie judge who have not taken senior status) vote whether to rehear the case en banc so we need 15 votes to get over that hurdle. If we do, then ten judges are chosen at random to sit on an en banc panel, plus the Chief Judge. At that point we might get more briefing or we might not, ditto re another oral argument.

Best to all,

Matt

This message has been sent via an announcement listserv. Your replies will go to me only. To be removed from the list, just send me a reply requesting to be removed.

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K va na pet t on for reh...CF.pdf

No. 09-17490
Decided September 21, 2012
Before Circuit Judges Thomas and Clifton and District Judge Pro

IN THE UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NATIVE VILLAGE OF KIVALINA; CITY OF KIVALINA,

Plaintiffs-Appellants,

v.

EXXONMOBIL CORPORATION; BP P.L.C.; BP AMERICA, INC.; BP PRODUCTS NORTH AMERICA, INC.; CHEVRON CORPORATION; CHEVRON U.S.A., INC.; CONOCOPHILLIPS COMPANY; ROYAL DUTCH SHELL PLC; SHELL OIL COMPANY; PEABODY ENERGY CORPORATION; THE AES CORPORATION; AMERICAN ELECTRIC POWER COMPANY, INC.; AMERICAN ELECTRIC POWER SERVICES CORPORATION; DUKE ENERGY CORPORATION; DTE ENERGY COMPANY; EDISON INTERNATIONAL; MIDAMERICAN ENERGY HOLDINGS COMPANY; PINNACLE WEST CAPITAL CORPORATION; THE SOUTHERN COMPANY; RELIANT ENERGY, INC.; XCEL ENERGY, INC.,

Defendants-Appellees.

On Appeal from the United States District Court
For the Northern District of California
The Honorable Saundra Brown Armstrong
District Court Case No. 08-cv-01138 SBA

PETITION FOR REHEARING EN BANC

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INTRODUCTION

The Court should grant rehearing *en banc* because the panel's majority opinion directly conflicts with the Supreme Court's holding in *Exxon Shipping Co. v. Baker*, 554 U.S. 471 (2008). The panel held that the federal Clean Air Act ("CAA") displaces plaintiffs' damages claim for injuries from global warming. It relied upon *American Electric Power Co. v. Connecticut*, 131 S. Ct. 2527 (2011) ("*AEP*"), where the Supreme Court held the CAA displaced a claim seeking injunctive relief against greenhouse gas emissions. But in *Exxon Shipping*, the Supreme Court unambiguously held that a federal common law damages claim is *not* displaced by the Clean Water Act ("CWA") – a federal environmental statute that, like the CAA, provides only injunctive relief and civil penalties – even though the CWA *does* displace a federal common law claim for injunctive relief. *Exxon Shipping* thus "suggests a different result" from the one reached by the majority, as the separate opinion here concurring in the result frankly stated. *See Kivalina v. ExxonMobil Corp., et al.*, No. 09-17490 (9th Cir. Sept. 21, 2012) ("*Kivalina*") (attached at Tab A hereto) at 11669 (Pro, J., concurring).

This question is of exceptional importance, as evidenced by the Supreme Court's frequent review of whether a statute displaces federal common law, including in recent cases such as *AEP* and *Exxon Shipping*. And "the unusual

importance of the underlying issue," *i.e.*, global warming, is also beyond doubt. *Massachusetts v. EPA*, 549 U.S. 497, 506 (2007).

The direct conflict here between the majority opinion and *Exxon Shipping* practically jumps off the page. *Exxon Shipping* expressly limited the case on which the majority's decision rested, *Middlesex County Sewerage Authority v. National Sea Clammers Ass'n*, 453 U.S. 1 (1981) ("*Sea Clammers*"), to situations where "plaintiffs' common law nuisance claims amounted to arguments for effluent-discharge standards different from those provided by the [Clean Water Act]." *Exxon Shipping*, 554 U.S. at 489 & n.7. As Judge Pro noted in his separate opinion here, *Exxon Shipping* "appears to be a departure from" *Sea Clammers*. *Kivalina* at 11663 (Pro, J., concurring). But the majority opinion ignored *Exxon Shipping*'s limitation of *Sea Clammers*. Here – as in *Exxon Shipping* – plaintiffs seek only damages under federal common law (the federal common law of nuisance here; the federal common law of maritime in *Exxon Shipping*) and thus the CAA does not displace plaintiffs' common law damages claim for the same reason that the CWA did not displace the common law damages claim in *Exxon Shipping*. *See id.* at 489 (holding the CWA did not "eliminate *sub silentio* companies' common law duties to refrain from injuring the bodies and livelihoods of private individuals"). The panel's decision to the contrary was error.

There is no reasoned basis on which to distinguish *Exxon Shipping*. All parties and both opinions of the panel agree that the CAA and CWA precedents on displacement are interchangeable. Indeed, *Sea Clammers*, upon which the panel majority (and defendants) rely, is, like *Exxon Shipping*, a CWA case. Nor does it matter that *Exxon Shipping* involved maritime law. *United States v. Texas*, 507 U.S. 529, 534 (1993) (holding "there is no support in our cases" for such a distinction in applying displacement test).

Consideration of Kivalina's case by the *en banc* Court is necessary to secure and maintain compliance with Supreme Court precedent as well as to ensure uniformity between *Kivalina* and this Court's decision in *Exxon Shipping* that the Supreme Court affirmed.

Kivalina is an Inupiat Eskimo village in Alaska. It is represented here by its governing bodies – the Native Village of Kivalina (a federally recognized Native American Tribe) and the City of Kivalina (an Alaskan municipality) (collectively, "Kivalina"). Kivalina alleges that defendants' emissions of greenhouse gases have contributed to global warming, which is injuring Kivalina by melting the sea ice that formerly protected it from fall and winter storms; the federal government has concluded that the result is a severe erosion problem such that the entire village

must now relocate or be destroyed.[1] Defendants – fossil fuel producers and coal-burning electric power producers – are among the world's largest global warming polluters by virtue of their massive greenhouse gas emissions. Kivalina invokes a long-recognized legal claim of public nuisance in which each polluter who contributes substantially to a body of pollution that is causing harm to the plaintiff may be held liable as a causal contributor.[2] Kivalina invokes federal common law due to the interstate nature of the pollution.[3] Kivalina also alleges that a group of the defendants conspired over many years to hide what they knew about the

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[1] GAO, Alaska Native Villages: Most are Affected by Flooding and Erosion, but Few Qualify for Federal Assistance, Dec. 2003, at 29-32, *available at* http://www.gao.gov/assets/250/240810.pdf; U.S. Army Corps of Engineers, Alaska District, Alaska Village Erosion Technical Assistance Program: An Examination of Erosion Issues in the Communities of Bethel, Dillingham, Kaktovik, Kivalina, Newtok, Shishmaref, and Unalakleet, Apr. 2006, at 23-25, *available at* http://housemajority.org/coms/cli/AVETA_Report.pdf.

[2] *See, e.g., Boim v. Holy Land Found. for Relief & Dev.*, 549 F.3d 685, 696-97 (7th Cir. 2008) (*en banc*) (Posner, J.) ("Even if the amount of pollution caused by each party would be too slight to warrant a finding that any one of them had created a nuisance (the common law basis for treating pollution as a tort), pollution of a stream to even a slight extent becomes unreasonable [and therefore a nuisance] when similar pollution by others makes the condition of the stream approach the danger point.") (quotation omitted); *California v. Gold Run Ditch & Mining Co.*, 4 P. 1152, 1158 (Cal. 1884).

[3] *See AEP*, 131 S. Ct. at 2535 ("'When we deal with air or water in their ambient or interstate aspects, there is a federal common law.'") (quoting *Illinois v. City of Milwaukee*, 406 U.S. 91, 103 (1972) ("*Milwaukee I*")).

catastrophic harms from global warming, including the very kind of harm now befalling the village. Kivalina seeks the money necessary to move its village out of harm's way.

The legal question here is of exceptional importance; it has repeatedly occupied the Supreme Court's attention, as noted above. As the defendants in *AEP* (some of whom are also defendants here), stated in their petition for *certiorari*: "The questions presented by this case are recurring and of exceptional importance to the Nation." Petition for a Writ of Certiorari, *American Electric Power Co. v. Connecticut*, U.S. Supreme Court No. 10-174, 2010 U.S. Briefs 174, at *12 (Aug. 2, 2010). For Kivalina, the exceptional importance of this case cannot be doubted inasmuch as its very physical and cultural existence are at stake, a fact the majority acknowledges. "Our conclusion obviously does not aid Kivalina, which itself is being displaced by the rising sea." *Kivalina* at 11657.

Kivalina respectfully submits that the grounds for rehearing *en banc* are satisfied.

ARGUMENT

I. THE PANEL OPINION CONFLICTS WITH *EXXON SHIPPING*.

This case squarely presents the issue of whether a statute that displaces a federal common law cause of action for injunctive relief also displaces a federal common law damages action. *Exxon Shipping* answers this question in the negative and directly conflicts with the panel decision.

Here, there is no dispute that the federal CAA displaces a federal common law claim seeking injunctive relief arising from air pollution generally or greenhouse gases specifically. That was the holding of *AEP*. Similarly, in *Exxon Shipping*, there was no dispute that the federal CWA displaced a federal common law claim for injunctive relief arising from water pollution. That was the holding of *City of Milwaukee v. Illinois*, 451 U.S. 304 (1981) ("*Milwaukee II*"). This Court expressly recognized in *Exxon Shipping*, prior to being affirmed in relevant part by the Supreme Court, that the displacement holding in *Milwaukee II* was tied to the relief sought: "*Milwaukee [II]* held that a federal district court could not impose and enforce more stringent effluent limitations than those established by the administrative agency charged with enforcement of the Clean Water Act, so *for purposes of a claim seeking that relief*, the Clean Water Act preempted the common law remedy." *In re Exxon Valdez*, 270 F.3d 1215, 1230 (9th Cir. 2001)

(emphasis added). The defendant in *Exxon Shipping* argued that *Milwaukee II* and *Sea Clammers* required the Court to find that the CWA displaced a punitive damages claim under the federal common law claim of maritime tort. This Court disagreed:

> [W]here a private remedy does not interfere with administrative judgments (as it would have in *Milwaukee [II]*) and does not conflict with the statutory scheme (as it would have in *Sea Clammers*), a statute providing a comprehensive scheme of public remedies need not be read to preempt a preexisting common law private remedy. *It is reasonable to infer that had Congress meant to limit the remedies for private damage to private interests, it would have said so. The absence of any private right of action in the Act for damage from oil pollution may more reasonably be construed as leaving private claims alone than as implicitly destroying them*.

Id. at 1231 (emphasis added).

The Supreme Court affirmed this holding and expressly limited the displacement analysis in *Milwaukee II* and *Sea Clammers* to situations where the plaintiff seeks different effluent standards from those set by the statute:

> If Exxon were correct here, there would be preemption of provisions for thwarting economic activity or, for that matter, compensatory damages for physical, personal injury from oil spills or other water pollution. But we find it too hard to conclude that a statute expressly geared to protecting 'water,' 'shorelines,' and 'natural resources' was intended to eliminate *sub silentio* companies' common law duties to refrain from injuring the bodies and livelihoods of private individuals.
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> * * *
>
> All in all, we see no clear indication of congressional intent to occupy the entire field of pollution remedies, *see, e.g., United States v. Texas*,

> 507 U.S. 529, 534 (1993) ("In order to abrogate a common-law principle, the statute must speak directly to the question addressed by the common law" (internal quotation marks omitted)); nor for that matter do we perceive that punitive damages for private harms will have any frustrating effect on the CWA remedial scheme, which would point to preemption. In this respect, this case differs from [*Sea Clammers* and *Milwaukee II*], where plaintiffs' common law nuisance claims amounted to arguments for effluent-discharge standards different from those provided by the CWA. Here, [plaintiff's] private claims for economic injury do not threaten similar interference with federal regulatory goals with respect to "water," "shorelines," or "natural resources."

Exxon Shipping, 554 U.S. at 488-89 & n.7.

Despite the decisions of this Court and the Supreme Court in *Exxon Shipping* that the absence of a federal statutory damages remedy does not displace a federal common law damages action, the panel here held the opposite. It concluded that, under *Sea Clammers* and *Exxon Shipping*, "if a cause of action is displaced, displacement is extended to all remedies" and therefore that *AEP* – an injunctive relief case like *Milwaukee II* – somehow *sub silentio* "extinguished Kivalina's federal common law public nuisance damage action." *Kivalina* at 11655.

The majority here misread *Exxon Shipping* by placing undue emphasis on words that, when taken out of context, take on a changed meaning. In *Exxon Shipping*, the Supreme Court rejected Exxon's attempt to distinguish between

compensatory damages (which Exxon conceded were not displaced) and punitive damages (which it contended were displaced). In doing so, the Supreme Court noted that it had "rejected similar attempts to sever remedies from their causes of action." 554 U.S. at 489 (citing *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 255-56 (1993)). The panel majority construed this statement to mean that once displacement attaches to a cause of action, it applies to "all remedies." *Kivalina* at 11655. Not so. If it were true, *Exxon Shipping* would have come out the other way.

Judge Pro's opinion concurring in the result points out the flaw in the majority's reasoning:

> While *Exxon* stated that the Court has rejected "attempts to sever remedies from their causes of action," *id.* at 489, *Exxon* made this pronouncement in the context of examining whether one form of damages ought to be severed from another form of damages without any statutory textual basis for doing so. The *Exxon* Court was not evaluating whether a claim for damages is of a different character than a claim for injunctive relief. In fact, the case upon which *Exxon* relied for that statement, *Silkwood*, likewise disapproved of an attempt to sever compensatory and punitive damages, but its overall holding suggests that severing rights and remedies *is appropriate* as between damages and injunctive relief in some circumstances

Kivalina at 11665 (Pro, J., concurring) (emphasis added). Judge Pro then explains that *Silkwood* actually supports Kivalina's position because it held that punitive damages under state law were available against a nuclear plant operator even

though Congress had preempted states from enjoining nuclear plant operations under state law. *Id*. at 11665-66. "Indeed, the Supreme Court concluded that congressional silence on the matter of damages claims, and its failure to provide a federal remedy for injured persons, made it 'difficult to believe that Congress would, without comment, remove all means of judicial recourse for those injured by illegal conduct.'" *Id.* at 11666 (quoting *Silkwood*, 464 U.S. at 251).

In short, both *Exxon* and *Silkwood* stand for the proposition that it *is* appropriate to treat a damages claim and an injunctive claim differently for purposes of determining whether Congress intended to displace or preempt common law. And, as Judge Pro also observed, *Exxon* and *Silkwood* are not alone in their disparate treatment of injunctive and damages claims: "It is not inexorably the rule that the unavailability of one remedy necessarily precludes the availability of another remedy arising out of the same asserted right or injury." *Id.* at 11666 n.1 (Pro, J. concurring) (citing *Cipollone v. Liggett Group, Inc*. 505 U.S. 504, 518-19 (1992), and *Ex Parte Young*, 209 U.S. 123 (1908)).

Nor can *Exxon Shipping* be distinguished on the basis that it involved maritime law rather than federal common law, or that the claimed involved was labeled "maritime tort" rather than "maritime nuisance." In applying the displacement of federal common law test, "there is no support in our cases . . . for a

distinction between general federal common law and federal maritime common law." *United States v. Texas*, 507 U.S. 529, 534 (1993); *see also Yamaha Motor Corp., U.S.A. v. Calhoun*, 516 U.S. 199, 206 (1996) (holding that maritime law is "a species of judge-made federal common law"). And any alleged distinction between maritime tort and "nuisance" is merely semantic. *See, e.g., Louisiana ex rel. Guste v. M/V Testbank*, 752 F.2d 1019, 1030-31 (5th Cir. 1985) (*en banc*) (holding in maritime tort case that "rephrasing the claim as a public nuisance claim does not change its essential character") (quotation marks omitted). The majority itself implicitly recognized the falsity of such distinctions by declining defendants' invitation to embrace them here.

To be sure, in *Exxon Shipping* this Court accepted an alleged distinction between maritime tort and maritime nuisance in an attempt to distinguish *Conner v. Aerovox, Inc*., 730 F.2d 835 (1st Cir. 1984), a maritime nuisance case that had held such a claim to be displaced by the CWA under *Milwaukee II*. *See In re Exxon Valdez*, 270 F.3d at 1231. But *Conner* is no longer good law in light of *Exxon Shipping* (which explains why defendants never cited it in any of their briefs), and under the Supreme Court's reasoning there is no longer any basis for distinguishing it.

In fact, a nuisance claim lends itself naturally to *Exxon Shipping*'s

distinction between injunctive and damages claims because the substance of a public nuisance claim for damages fundamentally differs from that of a public nuisance claim for injunctive relief.[4] The very balancing process that compares the utility of the defendant's conduct to the plaintiff's harm – a process that defendants contend would inevitably embroil this public nuisance case in a regulatory enterprise assigned to the Environmental Protection Agency[5] – is dispensed with in a damages case, especially where, as here, the harm is severe. *See* Restatement (Second) of Torts § 829A (1979) ("An intentional invasion of another's interest in the use and enjoyment of land is unreasonable if the harm resulting from the invasion is severe and greater than the other should be required to bear without compensation."); *see also id*. cmt. b ("[C]ertain types of harm may be so severe as to require a holding of unreasonableness as a matter of law, regardless of the utility of the conduct."); *id.* § 826 cmt. f ("The process of comparing the general utility of the activity with the harm suffered as a result is adequate if the suit is for an injunction prohibiting the activity. But it may sometimes be incomplete and

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[4] *See, e.g.*, Restatement (Second) of Torts § 821B cmt. i (1979) ("There are numerous differences between an action for tort damages and an action for injunction or abatement, and precedents for the two are by no means interchangeable.").

[5] *See, e.g.*, Answering Br. for Defendants-Appellees Shell Oil Co. *et al.* at 66.

therefore inappropriate when the suit is for compensation for the harm imposed."). Kivalina's nuisance claim fits *Exxon Shipping*'s distinction between an injunctive claim and a damages claim perfectly.

The common thread running throughout the displacement cases is that the federal common law cannot create a parallel track with a regulatory regime established by Congress. Thus, in *AEP* the displacement holding, like *Milwaukee II,* was expressly limited to injunctive relief claims seeking abatement of the nuisance. "We hold that the Clean Air Act *and the EPA actions it authorizes* displace any federal common law right *to seek abatement of carbon-dioxide emissions* from fossil-fuel fired power plants." *AEP*, 131 S. Ct. at 2537 (emphases added). *AEP* emphasized the critical fact that the CAA empowered EPA to grant exactly the relief plaintiffs sought. "The Second Circuit erred, we hold, in ruling that federal judges may *set limits on greenhouse gas emissions in face of a law empowering EPA to set the same limits.*" *Id*. at 2540 (emphasis added). And again: "[t]he [CAA] itself thus provides a means to seek limits on emissions of carbon dioxide from domestic power plants – *the same relief the plaintiffs seek by invoking federal common law. We see no room for a parallel track.*" *Id.* at 2538 (emphases added).

Here, Kivalina does not seek to set emissions caps. It seeks damages.

Federal common law applies where a court "is compelled to consider federal questions which cannot be answered from federal statutes alone." *Milwaukee II*, 451 U.S. at 313. The CAA lacks any parallel damages remedy for air pollution victims and thus does not provide an answer to the question of whether Kivalina is owed compensation. *AEP* itself recognizes that remedies are at the heart of the displacement inquiry: the "reach of remedial provisions is important to [the] determination [of] whether [a] statute displaces federal common law." *AEP*, 131 S. Ct. at 2538. Yet the panel here concluded that *AEP* mandates displacement in this case even though the CAA – like the CWA at issue in *Exxon Shipping* – has nothing at all to say about how, whether, when or by whom private claims for persons injured by interstate pollution should be compensated. The right to sue for damages for nuisance arises from the common law; if Congress intended to eliminate that right, it would say so. To borrow *Exxon Shipping*'s language, it is "too hard" to conclude that the CAA (a statute dedicated to cleaning the air) "was intended to eliminate *sub silentio* oil companies' common law duties to refrain from injuring" public and private property with air pollution. *Exxon Shipping*, 554 U.S. at 488-89.

The Supreme Court has previously emphasized the narrowness of the

displacement test:

> [T]he relevant inquiry is whether the statute "[speaks] *directly* to [the] question" otherwise answered by federal common law. *Milwaukee II*, *supra*, at 315. (emphasis added). As we stated in *Milwaukee II*, federal common law is used as a "necessary expedient" when Congress has not "spoken to a *particular* issue."

County of Oneida, New York v. Oneida Indian Nation of New York State, 470 U.S. 226, 236-37 (1985). The Court emphasized the words "*directly*" and "*particular*" to underscore the same point at issue here, *i.e.*, the mere establishment of a regulatory regime does not, by *sub silentio* implication, somehow wipe away all federal common law damages remedies for injured persons. In *Oneida*, the Court held that a statute prohibiting conveyances of tribal lands without the approval of the federal government did not displace a tribe's federal common law claim for ejectment seeking damages for wrongful conveyance and occupation of its land. 470 U.S. at 231-32. Although the legislation authorized the President to remove illegal occupants of Indian lands, it did "not speak directly to the question of *remedies* for unlawful conveyances of Indian land." *Id*. at 237 (emphasis added).

Similarly, in *United States v. Texas*, *supra*, the Supreme Court held that a federal common law claim for interest on debts owed to the United States by a state was not displaced by a statute that regulated federal debt collections. The circuit court had wrongly concluded that Congress had occupied the field of debt

collection and *sub silentio* displaced the federal common law rule governing interest on debts by state and local governments to the federal treasury. But, as in *Exxon Shipping* and *Oneida Indian Nation*, the fact that Congress was merely "silent" about a particular federal common law remedy while establishing other remedies, comprehensive so far as they went, was not enough to displace all common law remedies. *Texas*, 507 U.S. at 535.

The majority here reached the opposite conclusion from the one mandated by *Exxon Shipping*, *Oneida*, and *Texas*. It held that Congress' silence about private claims for pollution displaces all common law remedies. The panel simply failed to follow binding Supreme Court caselaw.

Finally, the panel could have avoided any arguable tension with *Sea Clammers* simply by adhering to *Exxon Shipping*'s explanation of *Sea Clammers*. The *Sea Clammers* plaintiffs had sued federal and state officials under statutory and constitutional claims, and had so intertwined their federal common law claims with alleged statutory violations and requests for injunctive relief that they "amounted to arguments for effluent-discharge standards different from those provided by the CWA." *Exxon Shipping*, 554 U.S. at 489 n.7. This is exactly what Kivalina does *not* seek here.

At bottom, the panel fails to identify anything in the CAA suggesting that

Congress intended, *sub silentio*, to eliminate the common law rights of interstate air pollution victims to sue for damages under federal nuisance law. *Exxon Shipping*, *Oneida Indian Nation* and *Texas* all forbid such displacement by statutory silence.

II. ANY OTHER BASIS FOR AFFIRMING WOULD CONFLICT WITH *AEP* AND *MASSACHUSETTS*.

Judge Pro would have affirmed the dismissal for lack of standing. *See Kivalina* at 11672-76. However, *AEP* affirmed (by an equally divided Court, due to Justice Sotomayor's recusal), the Second Circuit's decision that standing was proper in that global warming tort case. *See AEP*, 131 S. Ct. at 2535. And in *Massachusetts v. EPA*, 549 U.S. 497 (2007), the Court upheld standing in a global warming case. Here, standing is substantially less difficult to establish than in *Massachusetts*, for two reasons. First, Kivalina has sued private party emitters directly whereas in *Massachusetts* plaintiffs sued the government for failing to regulate third parties, a form of standing that "is ordinarily substantially more difficult to establish" than in a direct case. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 562 (1992) (quotation marks omitted). Kivalina therefore does not need any special assistance in the standing analysis from a statute or sovereign status that, defendants argued here, would be required under *Massachusetts*. Second,

Kivalina seeks damages, so redressability is easily satisfied. Kivalina has standing.

The district court dismissed this case on the basis of the political question doctrine (as well as standing). However, the Supreme Court rejected the political question argument in *AEP*. *See AEP*, 131 S. Ct. at 2535 & n.6. Here, where damages are sought, the argument is even weaker. *See Koohi v. United States*, 976 F.2d 1328, 1332 (9th Cir. 1992) ("A key element in our conclusion that the plaintiffs' action is justiciable is the fact that the plaintiffs seek only damages for their injuries."). The political question defense is of no avail.

CONCLUSION

Kivalina respectfully requests that the Court rehear this case *en banc*.

Dated: October 4, 2012

Respectfully submitted,

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CERTIFICATE OF COMPLIANCE
WITH TYPEFACE AND WORD LIMIT REQUIREMENTS

The foregoing Petition for Rehearing En Banc is proportionately spaced, has a typeface of 14-point plain, roman style font, and is 4,070 words, including footnotes, headings and quotations.

/s/ Matthew F. Pawa
Matthew F. Pawa

CERTIFICATE OF FILING AND SERVICE

I hereby certify that on October 4, 2012, I electronically filed the foregoing with the clerk of the Court for the United States Court of Appeals for the Ninth Circuit by using the appellate CM/ECF system.

Participants in the case who are registered CM/ECF users will be served by the appellate CM/ECF system.

/s/ Matthew F. Pawa
Matthew F. Pawa

From: [redacted]
Subject: K valina
Date: September 21, 2012 at 4:28 PM
To: Mary Wood mwood@law.uoregon.edu

Dear Friends of the Global Warming Legal Action Project -

I am sorry to report that the US Court of Appeals for the Ninth Circuit has rejected our appeal in *the Kivalina v. ExxonMobil* case. The Court held, in a very short and cursory opinion, that the federal Clean Air Act defines the full scope of all federal remedies for air pollution and, since there is no monetary damages remedy under the Clean Air Act, then there is no monetary damages remedy under federal common law. As you can see from the separate opinion by Judge Pro, the most recent case law from the Supreme Court -- the Exxon Shipping case (ie Exxon Valdez oil spill case), holds the opposite; Judge pro struggles to makes sense of the law here since older case law would have seemed to go against us while Exxon Shipping says that a federal environmental statute does not bar a federal common law claim for monetary damages. That separate opinion by Judge Pro shows how close we came to overcoming the Clean Air Act preemption argument. We have the right to seek en banc review (ie review by all of the approximately 12 active judges of the Ninth Circuit); if we decide to do that in consultation with our client, that legal brief will be due in 14 days. Meanwhile, we also have the option to re-file our state common law claims (which no court has yet addressed) in state court, if Kivalina so chooses. Stay tuned. One round for the bad guys in a long, hard fight.

Best to all,

Matt

This message has been sent via an announcement listserv. Your replies will go to me only. To be removed from the list, just send me a reply requesting to be removed.

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FOR PUBLICATION

UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

NATIVE VILLAGE OF KIVALINA; CITY OF KIVALINA,
Plaintiffs-Appellants,

v.

EXXONMOBIL CORPORATION; BP P.L.C.; BP AMERICA, INC.; BP PRODUCTS NORTH AMERICA, INC.; CHEVRON CORPORATION; CHEVRON U.S.A., INC.; CONOCOPHILLIPS COMPANY; ROYAL DUTCH SHELL PLC; SHELL OIL COMPANY; PEABODY ENERGY CORPORATION; THE AES CORPORATION; AMERICAN ELECTRIC POWER COMPANY, INC.; AMERICAN ELECTRIC POWER SERVICES CORPORATION; DUKE ENERGY CORPORATION; DTE ENERGY COMPANY; EDISON INTERNATIONAL; MIDAMERICAN ENERGY HOLDINGS COMPANY; PINNACLE WEST CAPITAL CORPORATION; THE SOUTHERN COMPANY; DYNEGY HOLDINGS, INC.; XCEL ENERGY, INC.; GENON ENERGY, INC.,
Defendants-Appellees.

No. 09-17490

D.C. No.
4:08-cv-01138-SBA

OPINION

Appeal from the United States District Court
for the Northern District of California
Saundra B. Armstrong, District Judge, Presiding

Argued and Submitted
November 28, 2011—San Francisco, California

Filed September 21, 2012

Before: Sidney R. Thomas and Richard R. Clifton, Circuit Judges, and Philip M. Pro, District Judge.*

Opinion by Judge Thomas;
Concurrence by Judge Pro

*The Honorable Philip M. Pro, District Judge for the U.S. District Court for the District of Nevada, sitting by designation.

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OPINION

THOMAS, Circuit Judge:

The Native Village of Kivalina and the City of Kivalina (collectively "Kivalina") appeal the district court's dismissal of their action for damages against multiple oil, energy, and utility companies (collectively "Energy Producers").[1] Kivalina

[1]Defendants are: (1) ExxonMobil Corporation; (2) BP P.L.C.; (3) BP America, Inc.; (4) BP Products North America, Inc.; (5) Chevron Corpora-

alleges that massive greenhouse gas emissions emitted by the Energy Producers have resulted in global warming, which, in turn, has severely eroded the land where the City of Kivalina sits and threatens it with imminent destruction. Kivalina seeks damages under a federal common law claim of public nuisance.

The question before us is whether the Clean Air Act, and the Environmental Protection Agency ("EPA") action that the Act authorizes, displaces Kivalina's claims. We hold that it does.

I

The City of Kivalina sits on the tip of a six-mile barrier reef on the northwest coast of Alaska, approximately seventy miles north of the Arctic Circle. The city, which was incorporated as a unified municipality under Alaska state law in 1969, has long been home to members of the Village of Kivalina, a self-governing, federally recognized tribe of Inupiat Native Alaskans. The City of Kivalina has a population of approximately four hundred residents, ninety-seven percent of whom are Alaska Natives.

Kivalina's survival has been threatened by erosion resulting from wave action and sea storms for several decades. *See* City of Kivalina, Alaska: Local Hazards Mitigation Plan, Resolution 07-11 (Nov. 9, 2007). The villagers of Kivalina depend on the sea ice that forms on their coastline in the fall, winter,

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tion; (6) Chevron U.S.A., Inc.; (7) Conocophillips Company; (8) Royal Dutch Shell PLC; (9) Shell Oil Company; (10) Peabody Energy Corporation; (11) The AES Corporation; (12) American Electric Power Company, Inc.; (13) American Electric Power Services Corporation; (14) Duke Energy Corporation; (15) DTE Energy Company; (16) Edison International; (17) Midamerican Energy Holdings Company; (18) Pinnacle West Capital Corporation; (19) The Southern Company; (20) Dynegy Holdings, Inc.; (21) Xcel Energy, Inc.; (22) Genon Energy, Inc.

and spring each year to shield them from powerful coastal storms. But in recent years, the sea ice has formed later in the year, attached later than usual, broken up earlier than expected, and has been thinner and less extensive in nature. As a result, Kivalina has been heavily impacted by storm waves and surges that are destroying the land where it sits. Massive erosion and the possibility of future storms threaten buildings and critical infrastructure in the city with imminent devastation. If the village is not relocated, it may soon cease to exist.[2]

Kivalina attributes the impending destruction of its land to the effects of global warming, which it alleges results in part from emissions of large quantities of greenhouse gases by the Energy Producers. Kivalina describes global warming as occurring through the build-up of carbon dioxide and methane (commonly referred to as "greenhouse gases") that trap atmospheric heat and thereby increase the temperature of the planet. As the planet heats, the oceans become less adept at removing carbon dioxide from the atmosphere. The increase in surface temperature also causes seawater to expand. Finally, sea levels rise due to elevated temperatures on Earth, which cause the melting of ice caps and glaciers. Kivalina contends that these events are destroying its land by melting the arctic sea ice that formerly protected the village from winter storms.

Kivalina filed this action against the Energy Producers, both individually and collectively, in District Court for the Northern District of California, alleging that the Energy Producers, as substantial contributors to global warming, are responsible for its injuries. Kivalina argued that the Energy

[2]"[I]t is believed that the right combination of storm events could flood the entire village at any time. . . . Remaining on the island . . . is no longer a viable option for the community." U.S. Gov't Accountability Office, GAO 04-142, Alaska Native Villages: Most Are Affected by Flooding and Erosion, but Few Qualify for Federal Assistance 30, 32 (2003).

Producers' emissions of carbon dioxide and other greenhouse gases, by contributing to global warming, constitute a substantial and unreasonable interference with public rights, including the rights to use and enjoy public and private property in Kivalina. Kivalina's complaint also charged the Energy Producers with acting in concert to create, contribute to, and maintain global warming and with conspiring to mislead the public about the science of global warming.

The Energy Producers moved to dismiss the action for lack of subject-matter jurisdiction, pursuant to Federal Rules of Civil Procedure 12(b)(1) and 12(b)(6). *Native Vill. of Kivalina v. Exxonmobile Corp.*, 663 F. Supp. 2d 863, 868 (N.D. Cal. 2009). They argued that Kivalina's allegations raise inherently nonjusticiable political questions because to adjudicate its claims, the court would have to determine the point at which greenhouse gas emissions become excessive without guidance from the political branches. They also asserted that Kivalina lacked Article III standing to raise its claims because Kivalina alleged no facts showing that its injuries are "fairly traceable" to the actions of the Energy Producers.

The district court held that the political question doctrine precluded judicial consideration of Kivalina's federal public nuisance claim. *Id.* at 876-77. The court found that there was insufficient guidance as to the principles or standards that should be employed to resolve the claims at issue. *Id.* at 876. The court also determined that resolution of Kivalina's nuisance claim would require determining what would have been an acceptable limit on the level of greenhouse gases emitted by the Energy Producers and who should bear the cost of global warming. *Id*. Both of these issues, the court concluded, were matters more appropriately left for determination by the executive or legislative branch in the first instance. *Id.* at 877.

The district court also held that Kivalina lacked standing under Article III to bring a public nuisance suit. *Id.* at 880-82. The court found that Kivalina could not demonstrate either a

"substantial likelihood" that defendants' conduct caused plaintiff 's injury nor that the "seed" of its injury could be traced to any of the Energy Producers. *Id.* at 878-81. The court also concluded that, given the remoteness of its injury claim, Kivalina could not establish that it was within sufficient geographic proximity to the Energy Producers' alleged "excessive" discharge of greenhouse cases to infer causation. *Id.* at 881-82. The court declined to exercise supplemental jurisdiction over the state law claims. *Id.* at 882-83.

We review a district court's dismissal for lack of subject-matter jurisdiction *de novo*. *Corrie v. Caterpillar, Inc.*, 503 F.3d 974, 979 (9th Cir. 2007). The dismissal may be affirmed "on any basis fairly supported by the record." *Id.* at 979. For the purpose of such review, this Court "must accept as true the factual allegations in the complaint." *Nurse v. United States*, 226 F.3d 996, 1000 (9th Cir. 2000); *see also United States v. Gaubert*, 499 U.S. 315, 327 (1991).

II

A

In contending that greenhouse gases released by the Energy Producers cross state lines and thereby contribute to the global warming that threatens the continued existence of its village, Kivalina seeks to invoke the federal common law of public nuisance. We begin, as the Supreme Court recently did in *American Electric Power Co., Inc. v. Connecticut* ("*AEP*"), 131 S. Ct. 2527, 2535 (2011), by addressing first the threshold questions of whether such a theory is viable under federal common law in the first instance and, if so, whether any legislative action has displaced it.

Despite the announced extinction of federal general common law in *Erie Railroad Co. v. Tompkins*, 304 U.S. 64, 78 (1938), the Supreme Court has articulated a "keener understanding" of the actual contours of federal common law. *AEP*,

131 S. Ct. at 2535. As Justice Ginsburg explained, "[t]he 'new' federal common law addresses 'subjects within the national legislative power where Congress has so directed' or where the basic scheme of the Constitution so demands." *Id.* (quoting Friendly, *In Praise of* Erie*–And of the New Federal Common Law*, 39 N.Y.U. L. Rev 383, 408 n.119, 421-22 (1964)). Sometimes, Congress acts directly. For example, Congress, in adopting the Employee Retirement Income Security Act ("ERISA"), expected federal courts to develop "a federal common law of rights and obligations under ERISA-regulated plans." *Pilot Life Ins. Co. v. Dedeaux*, 481 U.S. 41, 56 (1987). More often, federal common law develops when courts must consider federal questions that are not answered by statutes.

[1] Post-*Erie*, federal common law includes the general subject of environmental law and specifically includes ambient or interstate air and water pollution. *AEP*, 131 S. Ct. at 2535; *see also Illinois v. City of Milwaukee* ("*Milwaukee I*"), 406 U.S. 91, 103 (1972) ("When we deal with air and water in their ambient or interstate aspects, there is a federal common law.") (footnote omitted); *Int'l Paper Co. v. Ouellette*, 479 U.S. 481, 492 (1987) ("[T]he control of interstate pollution is primarily a matter of federal law.").

[2] Thus, federal common law can apply to transboundary pollution suits. Most often, as in this case, those suits are founded on a theory of public nuisance. Under federal common law, a public nuisance is defined as an "unreasonable interference with a right common to the general public." Restatement (Second) of Torts § 821B(1) (1979). A successful public nuisance claim generally requires proof that a defendant's activity unreasonably interfered with the use or enjoyment of a public right and thereby caused the public-at-large substantial and widespread harm. *See Missouri v. Illinois*, 200 U.S. 496, 521 (1906) (stating that public nuisance actions "should be of serious magnitude, clearly and fully proved"); *Connecticut v. Am. Elec. Power Co., Inc.*, 582 F.3d

309, 357 (2d Cir. 2009), *rev'd* 131 S. Ct. 2527 (2011) ("The touchstone of a common law public nuisance action is that the harm is widespread, unreasonably interfering with a right common to the general public.").

B

[3] However, the right to assert a federal common law public nuisance claim has limits. Claims can be brought under federal common law for public nuisance only when the courts are "compelled to consider federal questions which cannot be answered from federal statutes alone." *City of Milwaukee v. Illinois* ("*Milwaukee II*"), 451 U.S. 304, 314 (1981) (citations and internal quotations omitted). On the other hand, when federal statutes directly answer the federal question, federal common law does not provide a remedy because legislative action has displaced the common law. Federal common law is subject to the paramount authority of Congress. *New Jersey v. New York*, 283 U.S. 336, 348 (1931).

If Congress has addressed a federal issue by statute, then there is no gap for federal common law to fill. *Milwaukee II*, 451 U.S. at 313-14. "Federal common law is used as a 'necessary expedient' when Congress has not 'spoken to a particular issue.' " *Cnty. of Oneida, N.Y. v. Oneida Indian Nation of N.Y. State*, 470 U.S. 226, 236-37 (1985) (quoting *Milwaukee II*).

"The test for whether congressional legislation excludes the declaration of federal common law is simply whether the statute speak[s] directly to [the] question at issue." *AEP*, 131 S. Ct. at 2537 (alterations in original) (internal citation and quotation marks omitted). Although plainly stated, application of the test can prove complicated. The existence of laws generally applicable to the question is not sufficient; the applicability of displacement is an issue-specific inquiry. For example, in *Milwaukee I*, the Supreme Court considered multiple statutes potentially affecting the federal question. 406 U.S. at

101-03. Concluding that no statute directly addressed the question, the Supreme Court held that the federal common law public nuisance action had not been displaced in that case. *Id.* at 107. The salient question is "whether Congress has provided a sufficient legislative solution to the particular [issue] to warrant a conclusion that [the] legislation has occupied the field to the exclusion of federal common law." *Mich. v. U.S. Army Corps of Eng'rs*, 667 F.3d 765, 777 (7th Cir. 2011). Put more plainly, "how much congressional action is enough?" *Id.*

C

[4] We need not engage in that complex issue and fact-specific analysis in this case, because we have direct Supreme Court guidance. The Supreme Court has already determined that Congress has directly addressed the issue of domestic greenhouse gas emissions from stationary sources and has therefore displaced federal common law. *AEP*, 131 S. Ct. at 2530, 2537.

[5] In *AEP*, eight states, the city of New York, and three private land trusts brought a public nuisance action against "the five largest emitters of carbon dioxide in the United States." *Id.* at 2533-34. The *AEP* plaintiffs alleged that "defendants' carbon-dioxide emissions created a 'substantial and unreasonable interference with public rights,' in violation of the federal common law of interstate nuisance," and sought injunctive relief through a court-ordered imposition of emissions caps. *Id.* at 2534. Concluding that the Clean Air Act already "provides a means to seek limits on emissions of carbon dioxide from domestic power plants," the Supreme Court in *AEP* held "that the Clean Air Act and the EPA actions it authorizes displace any federal common law right to seek abatement" of such emissions. *Id.* at 2537-38.

[6] This case presents the question in a slightly different context. Kivalina does not seek abatement of emissions;

rather, Kivalina seeks damages for harm caused by past emissions. However, the Supreme Court has instructed that the type of remedy asserted is not relevant to the applicability of the doctrine of displacement. In *Exxon Shipping Co. v. Baker*, 554 U.S. 471 (2008), Exxon asserted that the Clean Water Act preempted the award of maritime punitive damages. *Id.* at 484. The Supreme Court disagreed, noting that it had "rejected similar attempts to sever remedies from their causes of action." *Id.* at 489 (citing *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238, 255-56 (1993)). In *Middlesex County Sewerage Authority v. National Sea Clammers Ass'n.,* 453 U.S. 1, 4 (1981), the Supreme Court considered a public nuisance claim of damage to fishing grounds caused by discharges and ocean dumping of sewage. The Court held that the cause of action was displaced, including the damage remedy. *Id*. at 21-22. Thus, under current Supreme Court jurisprudence, if a cause of action is displaced, displacement is extended to all remedies.

[7] Certainly, the lack of a federal remedy may be a factor to be considered in determining whether Congress has displaced federal common law. *Milwaukee I*, 406 U.S. at 103. But if the federal common law cause of action has been displaced by legislation, that means that "the field has been made the subject of comprehensive legislation" by Congress. *Milwaukee II*, 451 U.S. at 314, 325. When Congress has acted to occupy the entire field, that action displaces any previously available federal common law action. *Id.* Under *Exxon* and *Middlesex*, displacement of a federal common law right of action means displacement of remedies. Thus, *AEP* extinguished Kivalina's federal common law public nuisance damage action, along with the federal common law public nuisance abatement actions.

The Supreme Court could, of course, modify the *Exxon*/*Middlesex* approach to displacement, and will doubtless have the opportunity to do so. But those holdings are consistent with the underlying theory of displacement and causes

of action. Judicial power can afford no remedy unless a right that is subject to that power is present. If a federal common law cause of action has been extinguished by Congressional displacement, it would be incongruous to allow it to be revived in another form.

The fact that the damage occurred before the EPA acted to establish greenhouse gas standards does not alter the analysis. The doctrine of displacement is an issue of separation of powers between the judicial and legislative branches, not the judicial and executive branches. *Michigan*, 667 F.3d at 777. When the Supreme Court concluded that Congress had acted to empower the EPA to regulate greenhouse gas emissions, *Massachusetts v. EPA*, 549 U.S. 497, 528-29 (2007), it was a determination that Congress had "spoken directly" to the issue by legislation. Congressional action, not executive action, is the touchstone of displacement analysis. *See AEP*, 131 S. Ct. at 2537.

Nor does the Supreme Court's displacement determination pose retroactivity problems. The Supreme Court confronted this theory in the *Milwaukee* cases, holding in *Milwaukee II* that amendments to the Clean Water Act, passed after the decision in *Milwaukee I*, displaced the previously recognized common law nuisance claim because Congress had now "occupied the field through the establishment of a comprehensive regulatory program supervised by an expert administrative agency." *Milwaukee* II, 451 U.S. at 316. "[W]hen Congress addresses a question previously governed by a decision rested on federal common law the need for such an unusual exercise of lawmaking by federal courts disappears." *Id.* at 314. Kivalina concedes that its civil conspiracy claim is dependent upon the success of the substantive claim, so it falls as well.

III

[8] In sum, the Supreme Court has held that federal common law addressing domestic greenhouse gas emissions has

been displaced by Congressional action. That determination displaces federal common law public nuisance actions seeking damages, as well as those actions seeking injunctive relief. The civil conspiracy claim falls with the substantive claim. Therefore, we affirm the judgment of the district court. We need not, and do not, reach any other issue urged by the parties.

Our conclusion obviously does not aid Kivalina, which itself is being displaced by the rising sea. But the solution to Kivalina's dire circumstance must rest in the hands of the legislative and executive branches of our government, not the federal common law.

AFFIRMED.

PRO, District Judge, concurring:

The Native Village of Kivalina and the City of Kivalina (together "Kivalina") appeal the district court's dismissal of their federal common law public nuisance claim for damages against Appellees, who are oil, energy, and utility companies. In support of their federal common law nuisance claim, Kivalina alleges Appellees emit massive amounts of greenhouse gases that contribute to global warming which, in turn, has severely eroded the land where the City of Kivalina sits and threatens it with imminent destruction. Kivalina also brought conspiracy and concert of action claims which are dependent on their federal common law nuisance claim. Additionally, Kivalina brought a state law nuisance claim in the alternative to their federal common law claim. The district court dismissed the state law nuisance claim without prejudice to refiling in state court, and no one appeals that decision. Consequently, the question before us is whether Kivalina states a viable federal common law public nuisance claim for damages.

The majority opinion holds that the Clean Air Act ("CAA") and the Environmental Protection Agency ("EPA") action the Act authorizes displace Kivalina's claims. I write separately to address what I view as tension in Supreme Court authority on whether displacement of a claim for injunctive relief necessarily calls for displacement of a damages claim, and to more fully explain why I concur in the majority opinion's ultimate conclusion. I also write separately to express my view that Kivalina lacks standing.

I.

A.

"[F]ederal common law addresses subjects within national legislative power where Congress has so directed or where the basic scheme of the Constitution so demands." *Am. Elec. Power Co., Inc. v. Connecticut ("AEP")*, 131 S. Ct. 2527, 2535 (2011) (internal quotation marks and citation omitted). Among the subjects which may call for application of federal common law is environmental protection, particularly issues involving "air and water in their ambient or interstate aspects." *Id.* (citation omitted).

However, once Congress addresses a question previously answered by resort to federal common law, the federal common law is displaced. *Id.* at 2537. A federal statute displaces federal common law whenever a "legislative scheme [speaks] directly to a question." *City of Milwaukee v. Illinois ("Milwaukee II")*, 451 U.S. 304, 315 (1981). To determine whether a legislative enactment directly speaks to the question at issue, the reviewing court must "assess[ ] the scope of the legislation and whether the scheme established by Congress addresses the problem formerly governed by federal common law." *Id.* at 315 n.8. This analysis begins with the assumption that Congress, not the federal courts, sets out the "appropriate standards to be applied as a matter of federal law." *Id.* at 317.

The law of federal displacement is easily stated, but best understood by examination of its application through a series of Supreme Court cases beginning with *Illinois v. City of Milwaukee ("Milwaukee I")*, 406 U.S. 91 (1972). In *Milwaukee I*, the State of Illinois brought a federal common law nuisance abatement suit under the Supreme Court's original jurisdiction against four cities and two sewage commissions located in Wisconsin, alleging the defendants were polluting Lake Michigan. 406 U.S. at 93. After determining it had jurisdiction over the action, the Supreme Court evaluated federal statutory law governing interstate water pollution. *Id.* at 101-03. Specifically, the Supreme Court noted that the Rivers and Harbors Act of March 3, 1899 granted the Army Corps of Engineers some power to oversee industrial pollution, the Federal Water Pollution Control Act "tighten[ed] control over discharges into navigable waters so as not to lower applicable water quality standards," the National Environmental Policy Act of 1969 directed federal governmental agencies to evaluate environmental issues in agency decision making, and the Fish and Wildlife Act of 1956 and Fish and Wildlife Coordination Act reflected Congress's "increasing concern with the quality of the aquatic environment as it affects the conservation and safeguarding of fish and wildlife resources." *Id.* at 101-02.

The Supreme Court gave special attention to the Federal Water Pollution Control Act ("FWPCA"), which provided that while the primary responsibility for preventing and controlling water pollution lay with the States, "federal, not state, law . . . in the end controls the pollution of interstate or navigable waters." *Id.* at 102. The FWPCA included procedures for abatement of pollution if a State failed to act, including a potential suit by the Attorney General. *Id.* at 102-03. The Supreme Court nevertheless found that none of the identified enactments displaced Illinois's federal common law public nuisance claim, in part because the FWPCA specifically provided that there was no intent to displace state or interstate actions to abate water pollution with federal enforcement

actions. *Id.* at 104. The Supreme Court nevertheless declined to hear the case in its original jurisdiction, instead directing Illinois to bring the action in federal district court. *Id.* at 108.

In *Milwaukee I*, the Supreme Court acknowledged that "[i]t may happen that new federal laws and new federal regulations may in time pre-empt the field of federal common law of nuisance." *Id.* at 107. This prediction was realized in *Milwaukee II*. Following the Supreme Court's suggestion in *Milwaukee I*, Illinois re-filed its federal common law nuisance abatement suit in federal district court. *Milwaukee II*, 451 U.S. at 310. Congress thereafter enacted the Federal Water Pollution Control Act Amendments of 1972, also known as the Clean Water Act ("CWA"). *Id.* Under the amendments, it was "illegal for anyone to discharge pollutants into the Nation's waters except pursuant to a permit." *Id.* at 310-11 (citing 33 U.S.C. §§ 1311, 1342). The EPA was charged with administering the Act, and to the extent the EPA set effluent limitations on any particular pollutant, those limitations were incorporated into any permit. *Id.* at 311. The defendants operated their sewer systems under permits obtained from the Wisconsin state agency which was granted permitting authority under EPA's supervision. *Id.* The defendants did not "fully comply" with their permits' requirements, however, and the state permitting agency brought an enforcement action in state court. *Id.* The state court entered a judgment setting effluent limitations and requiring construction of sewage overflow controls. *Id.*

In the meantime, the State of Illinois continued to pursue its federal common law nuisance abatement action in federal court. *Id.* Illinois won at the trial level, and obtained injunctive relief ordering construction of facilities to eliminate sewer overflows and to achieve specified limits on effluents. *Id.* "Both the aspects of the decision concerning overflows and concerning effluent limitations . . . went considerably beyond the terms of [the defendants'] previously issued permits and the enforcement order of the state court." *Id.* at 312.

On appeal, the Supreme Court held that the CWA displaced Illinois's federal common law public nuisance abatement action because Congress had "occupied the field through the establishment of a comprehensive regulatory program supervised by an expert administrative agency." *Id.* at 317. Specifically, the Supreme Court found the CWA established "an all-encompassing program of water pollution regulation. *Every* point source discharge is prohibited unless covered by a permit, which directly subjects the discharger to the administrative apparatus established by Congress to achieve its goals." *Id.* at 318 (footnote omitted). This comprehensive treatment of water pollution left "no room for courts to attempt to improve on that program with federal common law." *Id.* at 319.

The Supreme Court did not rely only on the comprehensive nature of the regulatory scheme. It evaluated the particular nuisance abatement claims brought by Illinois to determine whether Congress spoke directly to the particular question at issue. With respect to the requested relief for effluent limitations, the Supreme Court noted that the EPA had set effluent limitations and that the defendants' permits incorporated those limitations. *Id.* at 319-20. Consequently, there was "no question" that Congress had addressed the problem of effluent limitations and therefore there was "no basis for a federal court to impose more stringent limitations than those imposed under the regulatory regime by reference to federal common law." *Id.* at 320. The Court reached a similar conclusion with respect to the requested relief for construction of controls for overflows because overflows were nothing more than point source discharges fully covered by the permitting process under the Act. *Id.* at 320-21. Accordingly, there was "no 'interstice' here to be filled by federal common law." *Id.* at 323. Moreover, the Supreme Court noted that one reason federal common law was needed in *Milwaukee I* was the lack of forum for Illinois to protect its rights, but this problem had been resolved through the CWA's scheme, which allowed

affected States the opportunity to participate in the permitting process. *Id.* at 325-26.

Finally, the Supreme Court rejected the argument that language in the CWA's citizen-suit provision preserved a federal common law remedy. *Id.* at 328-29. Subsection 505(e) of the CWA provided:

> Nothing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation or to seek any other relief (including relief against the Administrator or a State agency).

Id. at 328 (emphasis omitted). The Supreme Court concluded this did not preserve the federal common law nuisance abatement claim because the language meant only that the specific subsection providing for a citizen suit does not revoke other remedies, but it did not mean that "the Act as a whole does not supplant formerly available federal common-law actions." *Id.* at 328-29.

Neither *Milwaukee I* nor *Milwaukee II* involved damages claims. Both were for abatement of a nuisance and sought injunctive relief. However, the dissent in *Milwaukee II* argued that legislative history indicated Congress did not intend for the CWA to preclude actions for damages even if the alleged polluter was in compliance with regulatory standards under the Act. *Id.* at 343, 346 n.21.

The majority in *Milwaukee II* did not comment on the availability of a federal common law nuisance claim for damages under the CWA until it decided *Middlesex County Sewerage Authority v. National Sea Clammers Association*, 453 U.S. 1 (1981), approximately two months later. In *Middlesex*, an organization whose members harvested fish and an individual member of that organization brought suit in federal dis-

trict court against various governmental agencies and officials in New York, New Jersey, and the United States Government. 453 U.S. at 4. The plaintiffs alleged that waste materials were being discharged into interstate waterways which were polluting the Atlantic Ocean, resulting in a massive algae growth which negatively affected fishing and related industries in the Atlantic. *Id.* at 4-5. The plaintiffs brought statutory claims under the FWPCA, the Marine Protection, Research, and Sanctuaries Act of 1972 ("MPRSA"), the National Environmental Policy Act of 1969, state law environmental statutes, and the Federal Tort Claims Act. *Id.* at 5 n.6. The plaintiffs also brought claims under various provisions of the United States Constitution, federal common law, and state tort law. *Id.* The plaintiffs sought injunctive relief, declaratory relief, compensatory damages, and punitive damages. *Id.* at 5.

The Supreme Court held that it need not decide whether private parties such as the plaintiffs in *Middlesex* could bring a federal common law nuisance claim for damages because the FWPCA displaced the federal common law of nuisance in the area of water pollution as the Court held in *Milwaukee II*, and the MPRSA likewise displaced federal common law with respect to ocean dumping. *Id.* at 21-22. The dissent in *Middlesex* noted the apparent conflict between this result and legislative history which suggested that Congress intended that a common law action for damages caused by pollution would not be barred even where the defendant had complied with the FWPCA's requirements. *Id.* at 31 & n.15. *Middlesex* thus holds that where a federal common law nuisance claim for injunctive relief is displaced, a federal common law nuisance claim for damages claim likewise is displaced.

However, the Supreme Court's ruling in *Exxon Shipping Co. v. Baker*, 554 U.S. 471 (2008), appears to be a departure from *Middlesex*. In *Exxon*, various classes of plaintiffs brought federal maritime common law claims seeking compensatory damages for injuries arising out of the Exxon Valdez oil tanker spill off the Alaskan coast. 554 U.S. at 475-

76, 479. Additionally, a subclass of plaintiffs sought punitive damages under federal maritime common law. *Id.* at 479. The defendants stipulated to negligence and liability for compensatory damages. *Id.* However, the parties disputed whether the defendants were liable for punitive damages. *Id.* at 479-80. A jury found the defendants liable for $5 billion in punitive damages. *Id.* at 481.

On appeal, the Supreme Court considered whether the CWA displaced the availability of punitive damages under federal maritime common law. *Id.* at 488-89. The Supreme Court rejected the defendants' argument that the CWA's penalties for water pollution preempted common law punitive damages remedies available under maritime law. *Id.* Title 33 U.S.C. § 1321(o) specifically preserved damages claims "under any provision of law" for anyone harmed by a discharge of oil or other hazardous substance as against any owner or operator of a vessel, although it did not specify the source of law for any such damages claim, federal or state. *Id.* at 488. The Supreme Court rejected the argument that "any tort action predicated on an oil spill is preempted unless § 1321 expressly preserves it"—a position which the defendants did not attempt to defend—because the Court found it "too hard to conclude that a statute expressly geared to protecting 'water,' 'shorelines,' and 'natural resources' was intended to eliminate *sub silentio* oil companies' common law duties to refrain from injuring the bodies and livelihoods of private individuals." *Id.* at 488-89.

The Court also rejected the defendants' argument that although the CWA did not displace compensatory damages, it displaced punitive damages for economic loss. *Id.* The Supreme Court stated that "nothing in the statutory text points to fragmenting the recovery scheme this way, and we have rejected similar attempts to sever remedies from their causes of action." *Id.* at 489 (citing *Silkwood v. Kerr–McGee Corp.*, 464 U.S. 238, 255-56 (1984)). The Supreme Court saw "no clear indication of congressional intent to occupy the entire

field of pollution remedies," and allowing punitive damages for private harms would not have "any frustrating effect on the CWA remedial scheme, which would point to preemption." *Id.*

In reaching this conclusion, the Supreme Court specifically distinguished *Middlesex* and *Milwaukee II* on the basis that the plaintiffs' common law nuisance claims in those two cases "amounted to arguments for effluent-discharge standards different from those provided by the CWA. Here, [the plaintiffs'] private claims for economic injury do not threaten similar interference with federal regulatory goals with respect to 'water,' 'shorelines,' or 'natural resources.' " *Id.* at 489 n.7.

While *Exxon* stated that the Court has rejected "attempts to sever remedies from their causes of action," *id.* at 489, *Exxon* made this pronouncement in the context of examining whether one form of damages ought to be severed from another form of damages without any statutory textual basis for doing so. The *Exxon* Court was not evaluating whether a claim for damages is of a different character than a claim for injunctive relief. In fact, the case upon which *Exxon* relied for that statement, *Silkwood*, likewise disapproved of an attempt to sever compensatory and punitive damages, but its overall holding suggests that severing rights and remedies is appropriate as between damages and injunctive relief in some circumstances.

Silkwood involved state common law tort claims brought by the estate of a woman injured by nuclear contamination from a nuclear plant at which she worked. 464 U.S. at 243. The jury awarded compensatory and punitive damages, despite evidence that the plant operator complied with most federal regulations governing nuclear safety at the plant. *Id.* at 244-45. The defendant plant operator argued that its compliance with the federal regulations precluded an award of punitive damages. *Id.* at 245. The Supreme Court rejected that argument, concluding that although Congress granted a fed-

eral entity, the Nuclear Regulatory Commission, exclusive authority to regulate safety matters at nuclear power plants, and thus states could not enjoin nuclear power plants from operating for failure to comply with state safety standards, Congress nevertheless intended to allow damages awards under state law. *Id.* at 250-51, 256. Indeed, the Supreme Court concluded that congressional silence on the matter of damages claims, and its failure to provide a federal remedy for injured persons, made it "difficult to believe that Congress would, without comment, remove all means of judicial recourse for those injured by illegal conduct." *Id.* at 251.

Silkwood dealt with federal preemption of state law claims, and thus is not directly applicable to a federal displacement analysis. *See Milwaukee II*, 451 U.S. at 316-17. However, to the extent *Exxon* cited it in support of the proposition that compensatory and punitive damages generally are not severed absent a statutory basis to do so, that is all the weight *Silkwood* can bear. Under *Silkwood*, a state law claim for injunctive relief would be preempted by federal law because safety regulation at nuclear facilities is a matter exclusively within federal authority, while a state law damages claim nevertheless would not be preempted. Consequently, *Silkwood* supports the conclusion that the right and the remedy may indeed be severed when the particular claim at issue seeks injunctive relief versus damages.[1]

[1]It is not inexorably the rule that the unavailability of one remedy necessarily precludes the availability of another remedy arising out of the same asserted right or injury. *See, e.g.*, *Cipollone v. Liggett Group, Inc.*, 505 U.S. 504, 518-19 (1992) (holding that while state law warning or labeling requirements were preempted by federal tobacco labeling laws, (and thus a state law action for injunctive relief requiring any such labeling would be preempted), state law damages claims based on smoking-related injuries were not preempted); *Ex Parte Young*, 209 U.S. 123 (1908) (permitting a suit in federal court to prospectively enjoin a state official acting in his official capacity even though a similar claim for damages could not be brought in federal court due to the Eleventh Amendment).

B.

Against this backdrop of cases under the CWA, the Supreme Court in recent years has addressed the applicability of the CAA to greenhouse gases and whether the CAA displaces federal common law. In *Massachusetts v. EPA*, the Supreme Court evaluated a claim by several states, local governments, and private entities that the EPA had abdicated its responsibility under the CAA to regulate the emissions of greenhouse gases from motor vehicles. 549 U.S. 497, 505, 510, 514 (2007). The Supreme Court held that greenhouse gases fell within the CAA's definition of "air pollutant" under 42 U.S.C. § 7602(g), and the EPA therefore has the statutory authority to regulate the emission of greenhouse gases from new motor vehicles. *Id.* at 532.

The Supreme Court subsequently evaluated whether the CAA displaced federal common law nuisance abatement claims based on greenhouse gas emissions in *AEP*. In *AEP*, several States, a city, and three private land trusts brought federal common law nuisance abatement claims against four private power companies and the federal Tennessee Valley Authority. 131 S. Ct. at 2532. The *AEP* plaintiffs sought injunctive relief in the form of emissions caps on the five defendants, whom the complaints identified as the five largest carbon dioxide emitters in the United States. *Id.* at 2534. The Supreme Court held that the CAA "and the EPA actions it authorizes displace any federal common law right to seek abatement of carbon-dioxide emissions from fossil-fuel fired power plants." *Id.* at 2537. The Supreme Court noted that greenhouse gases were air pollutants subject to EPA regulation after *Massachusetts*, and the CAA "speaks directly" to carbon dioxide emissions from stationary sources such as the *AEP* defendants' plants. *Id.*

To reach this conclusion, the Supreme Court analyzed the scope of the CAA with respect to regulation of stationary sources:

> Section 111 of the Act directs the EPA Administrator to list "categories of stationary sources" that "in [her] judgment . . . caus[e], or contribut[e] significantly to, air pollution which may reasonably be anticipated to endanger public health or welfare." [42 U.S.C.] § 7411(b)(1)(A). Once EPA lists a category, the agency must establish standards of performance for emission of pollutants from new or modified sources within that category. § 7411(b)(1)(B); *see also* § 7411(a)(2). And, most relevant here, § 7411(d) then requires regulation of existing sources within the same category. For existing sources, EPA issues emissions guidelines, *see* 40 C.F.R. § 60.22, .23 (2009); in compliance with those guidelines and subject to federal oversight, the States then issue performance standards for stationary sources within their jurisdiction, § 7411(d)(1).

Id. at 2537-38 (footnote omitted). The Supreme Court also evaluated the enforcement mechanisms of emission standards in the CAA, including enforcement by States, by the EPA, and a citizen-suit provision pursuant to which "any person" may enforce emission standards in federal court. *Id.* at 2538 (citing 42 U.S.C. § 7604(a)). Additionally, States and private parties may petition the EPA to set an emission standard if EPA has not done so. *Id.* (citing 42 U.S.C. § 7607(b)). The Supreme Court concluded that the CAA "thus provides a means to seek limits on emissions of carbon dioxide from domestic power plants—the same relief the plaintiffs seek by invoking federal common law." *Id.*

The Supreme Court concluded the *AEP* plaintiffs' federal common law nuisance abatement claim therefore was displaced, even though EPA had not yet set emission standards for carbon dioxide: "The critical point is that Congress delegated to EPA the decision whether and how to regulate carbon-dioxide emissions from power plants; the delegation is what displaces federal common law." *Id.* The EPA's decision

whether to regulate was itself subject to judicial review, but Congress through the CAA entrusted the "complex balancing" involved in assessing the appropriate amount of regulation of greenhouse gases to the EPA in the first instance, not the federal courts. *Id.* at 2539 (citing 42 U.S.C. §§ 7411(a), (b), (c)(1), (d), (j)(1)(A)). Congress designated EPA to address these competing concerns because an "expert agency is surely better equipped to do the job than individual district judges issuing ad hoc, case-by-case injunctions." *Id.* at 2539. Allowing federal judges to "set limits on greenhouse gas emissions in face of a law empowering EPA to set the same limits," would upset the scheme Congress set forth in the CAA. *Id.* at 2540.

C.

Under *AEP*, federal common law nuisance abatement claims are displaced by the CAA. And under *Middlesex*, if federal common law nuisance abatement claims are displaced, so are federal common law nuisance damages claims.

While *Exxon* suggests a different result, *Exxon* appears to depart from *Milwaukee II* and *Middlesex*. *Exxon* concluded that the savings clause in 33 U.S.C. § 1321(o) preserved federal maritime common law damages claims despite Congress's provision of other federal remedies in § 1321. *Exxon*, 554 U.S. at 488-89. The savings clause in section 1321(o)(1) provides:

> Nothing in this section shall affect or modify in any way the obligations of any owner or operator of any vessel, or of any owner or operator of any onshore facility or offshore facility to any person or agency under any provision of law for damages to any publicly owned or privately owned property resulting from a discharge of any oil or hazardous substance or from the removal of any such oil or hazardous substance.

Section 1321(o)(1) is similar to the citizen suit provision in the CWA, which provides that "[n]othing in this section shall restrict any right which any person (or class of persons) may have under any statute or common law to seek enforcement of any effluent standard or limitation to seek any other relief . . . ." 33 U.S.C. § 1365(e). *Milwaukee II* concluded this language did not preserve federal common law nuisance claims:

> The subsection is common language accompanying citizen-suit provisions and we think that it means only that the provision of such suit does not revoke other remedies. It most assuredly cannot be read to mean that the Act as a whole does not supplant formerly available federal common-law actions but only that the particular section authorizing citizen suits does not do so.

451 U.S. at 328-29. Section 1321(o) did not specify that it was preserving federal maritime common law damages claims in the face of a federal enactment on the subject of federal remedies for oil spills any more than § 1365(e) stated it was preserving federal common law nuisance claims in the face of the CWA. *Exxon*'s interpretation of this clause appears to be at odds with *Milwaukee II*.

Exxon also seems to stray from *Middlesex*. *Exxon*'s reasoning for distinguishing *Middlesex* on the basis of the requested remedy is not entirely clear. *Exxon* either failed to acknowledge that the *Middlesex* plaintiffs sought damages as well as injunctive relief, or it concluded that the amount of damages requested in *Middlesex* effectively would have enjoined the defendants from engaging in ocean dumping, essentially setting a different effluent standard.

Exxon's departure from *Milwaukee II* and *Middlesex* may be explained by the fact that the defendants in *Exxon* apparently did not argue that the federal maritime common law claim was displaced in its entirety and conceded liability and

compensatory damages. Another explanation may be that the *Exxon* Court viewed § 1321 as not so comprehensive as to displace federal maritime common law negligence claims for damages, unlike the CWA provisions the *Milwaukee II* Court found displaced federal common law nuisance claims.

Regardless of *Exxon*'s effect on the viability of federal maritime common law negligence claims for damages under § 1321, *Milwaukee II*, *Middlesex*, *AEP*, and the comprehensive nature of the CAA lead to the conclusion that Kivalina's federal common law nuisance claim for damages in this case is displaced. Congress has spoken directly to the question of what remedies are available under federal law for air pollution. The CAA sets forth a comprehensive regulatory scheme committed to an expert agency, coupled with a variety of enforcement mechanisms, including enforcement by States, the EPA, and private parties. Consequently, the lack of a federal damages remedy is not indicative of a gap which federal common law must fill. Congress could have included a federal damages cause of action in the CAA, and it may add one at any time, but thus far it has opted not to do so. By supplying a federal remedy Congress chose not to provide, this Court would not be "filling a gap," it would be "providing a different regulatory scheme" than the one chosen by Congress. *Milwaukee II*, 451 U.S. at 324 n.18.

Displacement of the federal common law does not leave those injured by air pollution without a remedy. Once federal common law is displaced, state nuisance law becomes an available option to the extent it is not preempted by federal law. *AEP*, 131 S. Ct. at 2540 ("In light of our holding that the Clean Air Act displaces federal common law, the availability *vel non* of a state lawsuit depends, *inter alia*, on the preemptive effect of the federal Act."). The district court below dismissed Kivalina's state law nuisance claim without prejudice to refiling it in state court, and Kivalina may pursue whatever remedies it may have under state law to the extent their claims are not preempted.

I therefore concur in the majority opinion that the CAA and the EPA action the Act authorizes displace Kivalina's claims. Because Kivalina's federal common law nuisance damages claim is displaced, the Court need not address the open question of whether Kivalina is the type of party that can bring a federal common law nuisance claim. *See AEP*, 131 S. Ct. at 2536-37 (noting that the Supreme Court had "not yet decided whether private citizens . . . may invoke the federal common law of nuisance to abate out-of-state pollution," but concluding the question was "academic" because the plaintiffs' federal common law nuisance claim was displaced by the CAA).

II.

The district court found Kivalina lacked standing. Standing is a jurisdictional issue deriving from the "case or controversy" requirement of Article III of the United States Constitution. *Cole v. Oroville Union High Sch. Dist.*, 228 F.3d 1092, 1098 (9th Cir. 2000). Standing depends on "whether a party has a sufficient stake in an otherwise justiciable controversy to obtain judicial resolution of that controversy, and serves to ensure that legal questions presented to the court will be resolved in a concrete factual context conducive to a realistic appreciation of the consequences of judicial action." *Hall v. Norton*, 266 F.3d 969, 975 (9th Cir. 2001) (quotations, alterations, and internal citation omitted).

The party invoking federal jurisdiction bears the burden of establishing standing. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 561 (1992). The nature of that burden depends on the stage of the litigation. *Am. Fed'n of Gov't Emps. Local 1 v. Stone*, 502 F.3d 1027, 1032 (9th Cir. 2007). A plaintiff must support each element of the standing inquiry "in the same way as any other matter on which the plaintiff bears the burden of proof, *i.e.*, with the manner and degree of evidence required at the successive stages of the litigation." *Lujan*, 504 U.S. at 561. Consequently, at the dismissal stage, the Court accepts as true all factual allegations in the complaint and

draws all reasonable inferences therefrom in the nonmoving party's favor. *Ass'n for L.A. Deputy Sheriffs v. Cnty. of L.A.*, 648 F.3d 986, 991 (9th Cir. 2011). A complaint's "general factual allegations of injury resulting from the defendant's conduct may suffice, for on a motion to dismiss we presume that general allegations embrace those specific facts that are necessary to support the claim." *Jewel v. Nat'l Sec. Agency*, 673 F.3d 902, 907 (9th Cir. 2011) (alteration, citation, and internal quotation marks omitted). However, the complaint must allege sufficient facts plausibly establishing each element of the standing inquiry. *Bell Atl. Corp. v. Twombly*, 550 U.S. 544, 556 (2007); *Lujan*, 504 U.S. at 561; *Barnum Timber Co. v. EPA*, 633 F.3d 894, 899 (9th Cir. 2011).

To establish standing under Article III of the Constitution, a plaintiff must show "(1) injury in fact; (2) causation; and (3) likelihood that the injury will be redressed by a favorable decision." *Am. Civil Liberties Union of Nev. v. Lomax*, 471 F.3d 1010, 1015 (9th Cir. 2006). Specifically with respect to causation, the plaintiff must demonstrate that its injury is "fairly . . . trace[able] to the challenged action of the defendant, and not . . . th[e] result [of] the independent action of some third party not before the court." *Pritikin v. Dep't of Energy*, 254 F.3d 791, 797 (9th Cir. 2001) (alterations in original) (citation omitted). The "line of causation" between the defendant's action and the plaintiff 's harm must be "more than 'attenuated.' " *Maya v. Centex Corp.*, 658 F.3d 1060, 1070 (9th Cir. 2011) (quoting *Allen v. Wright*, 468 U.S. 737, 757 (1984)). However, a "causal chain does not fail simply because it has several 'links,' provided those links are 'not hypothetical or tenuous' and remain 'plausib[le].' " *Id.* (quoting *Nat'l Audubon Soc., Inc. v. Davis*, 307 F.3d 835, 849 (9th Cir. 2002)). But where the causal chain "involves numerous third parties whose independent decisions collectively have a significant effect on plaintiffs' injuries, . . . the causal chain [is] too weak to support standing at the pleading stage." *Id.* (citations and internal quotation marks omitted).

Kivalina alleges that it is located at the tip of a barrier reef, and that global warming has harmed Kivalina because sea ice which used to protect Kivalina from coastal storms, waves, and surges now forms later in the year, attaches to the coast later, breaks up earlier, and is less extensive. Kivalina thus is more exposed to storm waves and surges which are eroding the land upon which Kivalina sits to such an extent that Kivalina must relocate. According to the Complaint, Appellees are various oil, energy, and utility companies who annually emit millions of tons of greenhouse gases, and whom Kivalina thus identifies as "substantial contributors" to global warming.

Kivalina's Complaint describes global warming as follows:

> Energy from the sun heats the Earth, which re-radiates the energy to space. Carbon dioxide and other greenhouse gases absorb some of the outgoing infrared energy, raising the temperature of the Earth's atmosphere. Carbon dioxide is by far the most significant greenhouse gas emitted by human activity. . . . A large fraction of carbon dioxide emissions persist in the atmosphere for several centuries, and thus have a lasting effect on climate. Atmospheric concentrations of carbon dioxide and other greenhouse gases continue to increase as each year's emissions are added to those that came before. Carbon dioxide levels in the atmosphere have increased by 35 percent since the dawn of the industrial revolution in the 18th century, and more than one-third of the increase has occurred since 1980. . . . Processes on land and in the oceans that remove carbon dioxide from the atmosphere are unable to keep pace with these emissions. As a result, the natural carbon cycle is out of balance and carbon dioxide levels in the atmosphere are increasing every year. . . . The global linear warming trend over the last 50 years is twice that of the previous 50 years. . . . The Arctic

> is warming at approximately twice the global average.

According to the Complaint, global warming and the recognition of its potential implications are "not new," with observations, calculations, and predictions as to its effect dating back as far as the late 1800s.

Kivalina alleges specifically with respect to Appellees that greenhouse gas emissions from Appellees' operations "no matter where such operations are located, rapidly mix in the atmosphere and cause an increase in the atmospheric concentration of carbon dioxide and other greenhouse gases worldwide. The heating that results from the increased carbon dioxide and other greenhouse gas concentrations to which defendants contribute cause specific, identifiable impacts in Kivalina." Kivalina further alleges that Appellees "knew that their individual greenhouse gas emissions were, in combination with emissions and conduct of others, contributing to global warming and causing injuries to entities such as the Plaintiffs."

Kivalina has not met the burden of alleging facts showing Kivalina plausibly can trace their injuries to Appellees. By Kivalina's own factual allegations, global warming has been occurring for hundreds of years and is the result of a vast multitude of emitters worldwide whose emissions mix quickly, stay in the atmosphere for centuries, and, as a result, are undifferentiated in the global atmosphere. Further, Kivalina's allegations of their injury and traceability to Appellees' activities is not bounded in time. Kivalina does not identify when their injury occurred nor tie it to Appellees' activities within this vast time frame. Kivalina nevertheless seeks to hold these particular Appellees, out of all the greenhouse gas emitters who ever have emitted greenhouse gases over hundreds of years, liable for their injuries.

It is one thing to hold that a State has standing to pursue a statutory procedural right granted to it by Congress in the

CAA to challenge the EPA's failure to regulate greenhouse gas emissions which incrementally may contribute to future global warming. *See Massachusetts*, 549 U.S. at 516-20. It is quite another to hold that a private party has standing to pick and choose amongst all the greenhouse gas emitters throughout history to hold liable for millions of dollars in damages.

III.

For the reasons articulated above, I concur in the majority's conclusion that the CAA displaces Kivalina's federal common law nuisance claim for damages. Additionally, I would hold that Kivalina lacks standing.

From: **Mary Wood** mwood@uoregon.edu
Subject: Re: law-faculty: Required 1L Professional Development course
Date: June 14, 2012 at 9:33 PM
To: Heather Brinton hbrinton@uoregon.edu

Hi there - I'm in La Jolla Cal at that climate workshop and won't be at the meeting. I'll connect with you on monday if things wiht mom are stable thanks!

Mary Christina Wood
Philip H. Knight Professor
Faculty Director, Environmental and
Natural Resources Law Program
University of Oregon School of Law
1515 Agate St.
Eugene, OR 97403-1221
(541) 346-3842
mwood@law.uoregon.edu

On Jun 13, 2012, at 7:55 PM, Heather Brinton wrote:

> Hey Mims,
>
> Not sure whether you will be around for Friday's meeting but if you are, please consider supporting Rebekah's proposal. We can talk more about it if you want but I really think it is important given the situation our student's face. Also, I have spoken with her about the LL.M. working group and if we had a chance to talk, I'd like to mention it to you the substance of it.
>
> More importantly, Tom would like to meet about the Polict Inititiative. He sent a message earlier today. Don't know when you will be leaving town but if at all possible, this is my priority. I have met with him several times and have some to share.
>
> Hope your mom is o.k. and things are going well.
>
> HB
>
> ---
>
> **From:** law-faculty-bounces@lists.uoregon.edu [law-faculty-bounces@lists.uoregon.edu] on behalf of Rebekah Hanley [rhanley@uoregon.edu]
> **Sent:** Wednesday, June 13, 2012 7:34 PM
> **To:** Suzanne Rowe; law-faculty@lists.uoregon.edu
> **Subject:** Re: law-faculty: Required 1L Professional Development course
>
> Hello everyone,
>
> I'm sorry that some faculty members were unable to participate in our extensive discussion during the last faculty meeting. I'll reiterate here some of what I said then. I'll also add a bit of new information.
>
> I strongly believe that we must implement a professional development requirement. Our nine-month post-graduation employment rate dropped to about 70% for the Class of 2011. That figure includes part-time, short-term, non-legal, and non-professional employment. It is my responsibility — our responsibility — to be proactive and creative in an effort to better serve our students, many of whom lack professional experience or exposure and who face an incredibly competitive job market.
>
> In a sense, this course already exists as an optional offering -- we encourage all students to engage in the included activities. But in general, the students who need this information, practice, and feedback the most are the students who choose to engage with the Career Center (and others) on these matters the least.

Many law schools mandate that 1Ls complete certain activities included in this proposal, requiring 1Ls, for example, to meet with a career counselor and to create a polished resume and cover letter. Some require more. Just today I learned that Vermont Law requires all 1Ls to participate in a two-day professional development boot camp around the beginning of the second semester. This is how Vermont Law describes the requirement on its website: "**Boot Camp.** This is a ***mandatory*** two-day professional development program, including an afternoon networking reception. Featured topics are: interview skills, assessing your strengths, thinking about what career paths might be right for you, networking strategies, professional etiquette, finding a summer internship and what to expect from a summer position."

During the spring semester of the first-year, students have opportunities to apply for clinics, externships, and paid employment. They must submit applications to secure interviews and they must impress interviewers to secure offers. Students who are not paying attention or who are not prepared to engage in these efforts can miss out on what might have been important educational and professional opportunities. Second-year students who want to pursue work with certain kinds of employers must submit applications for their second summer by mid-August, before their second-year classes begin. They will interview for those opportunities during the second week of their second year of law school. We will miss the chance to help these students succeed if we wait until after 1L year to work with them on their understanding of professional opportunities, their application preparation, and their interview skills.

As proposed, the course is quite customizable; each student will determine which activities, resources, and conversations will be most helpful based on her interests and experiences.

Thank you for considering these thoughts about my proposal.

Rebekah Hanley
Assistant Dean
Center for Career Planning and
Professional Development
University of Oregon School of Law
1221 University of Oregon
Eugene, OR 97403-1221
(541) 346-3809
rhanley@uoregon.edu

From: Suzanne Rowe <srowe@uoregon.edu>
Date: Wed, 13 Jun 2012 18:44:37 -0700
To: "law-faculty@lists.uoregon.edu" <law-faculty@lists.uoregon.edu>
Subject: Re: law-faculty: Required 1L Professional Development course

Just to balance the discussion, let me say that I'm in favor of making this required, though not for credit.
-- Suzanne
--
Suzanne E. Rowe
University of Oregon School of Law
Eugene, OR 97403-1221
srowe@uoregon.edu

On Jun 13, 2012, at 6:37 PM, Leslie Harris wrote:

> I also agree.
>
> Leslie

On Jun 13, 2012, at 6:34 PM, BaLaw98@aol.com wrote:

> For whatever it may be worth, I am in basic agreement with Ofer on this one. I created a similar course at a different law school in the early 1990's. It was a not-for-credit offering, and had more practice-oriented content than the proposed one seems to have; but it drew a good enrollment and, I think, helped a number of students to find jobs.
>
> Barbara
>
> In a message dated 6/13/2012 6:27:06 P.M. Pacific Daylight Time, ofer@uoregon.edu writes:
>
> > Unfortunately, I will miss tomorrow's faculty meeting and so I write to re-express my opposition to making the suggested course a REQUIRED one.
> > Assuming that we should offer such a course for credit, making it a required part of our first year curriculum is, I think, going too far. As the proposal concedes, such a required course is unprecedented in American law schools—and for good reasons. Students should be able to decide for themselves whether to upload their resume onto Symplicity, whether to "engage in a self-assessment" regarding their career choices, or whether to attend Lane County Bar luncheons. (Required networking and soul-searching also seem a bit premature for first year students struggling with the fundamentals of their new profession.) Most importantly, the course's subject matter is simply not essential for legal education, and may benefit some but certainly not all students. This valuable course should be made available to those who wish to take it, but should not be foisted upon them all.
> >
> > Ofer Raban
> > Associate Professor of Law
> > Elmer Sahlstrom Senior Fellow
> > University of Oregon School of Law
> > http://law.uoregon.edu/faculty/ofer/
> >
> > _____
> > law-faculty mailing list
> > law-faculty@lists.uoregon.edu
> > https://lists-prod.uoregon.edu/mailman/listinfo/law-faculty
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https://lists-prod.uoregon.edu/mailman/listinfo/law-faculty

From: **Union of Concerned Scientists** orders@eventbrite.com
Subject: Order Confirmation for Join UCS for the launch of the Center for Science and Democracy
Date: May 28, 2012 at 1:16 PM
To: mwood@law.uoregon.edu

Your order for Join UCS for the launch of the Center for Science and Democracy is complete!

Wednesday, June 13, 2012 from 4:00 PM to 7:00 PM (PT)

Join UCS for the launch of the Center for Science and Democracy
Robert Paine Scripps Forum for Science, Society and the Environment
Scripps Institution of Oceanography
8610 Kennel Way
La Jolla, CA 92037

Questions about the event?
Contact [redacted]

Your Receipt

May 28, 2012

Order #: 3390066781-89278718

Name	Type	Quantity
Mary Wood	Attending	1

This order is subject to Eventbrite Terms of Service

Event details

We will send you detailed information on transportation and parking through a reminder email one day before the event.

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Access your event information with the Eventbrite app.

Available on the App Store

Available in Android Market

Eventbrite | 651 Brannan St. Suite 110 | San Francisco, CA 94107

From: **Isla Dane** isla@uoregon.edu
Subject: Super Shuttle Reservation
Date: June 8, 2012 at 4:53 PM
To: Mary Wood mwood@uoregon.edu

ID

Hi Mary,

I can't schedule your super shuttle reservation without a credit card. The law school does not reserve anything with its credit card, so you would have to use your personal card.

Here is the information in case you can call and make that reservation with your card:
Round trip transportation from San Diego airport to La Jolla Shores Hotel.
Arrival at San Diego airport: 6-13-12 @ 6:39pm, UA 0427
Depart San Diego airport: 6-16-12 @ 7:08am, UA 0637 **You need to make sure they know what time to pick you up at La Jolla Shores to get to your flight in time.

Let me know if I need to do this on Monday, but I'd still need a credit card from you.

Thanks.
Isla

From: **Mary Wood** mwood@uoregon.edu [redacted]
Subject: Fwd: SW Climate Assessment announcement
Date: April 3, 2012 at 11:06 AM
To: Canon Luerkens canon@uoregon.edu

MW

hi Canon - this should be printed for the warm springs speech file, in May. Could you start looking into travel for this and the other conf. in June? I'll send you an email from Howie Arnett, who proposes I get there by public transportation, which would be great with me.

Also on this one, they are going to resend the speaker's packet. I guess I need to get registered on line and I missed that detail before. Could you try to do it for me? Thanks!

As to the Cal conference at La Jolla in June,have you heard anything on travel costs for that? We have no money (well, 8 dollars). So if you look back at the emails I think there is a way to apply for travel costs. Could you pursue that if you haven't already? Thanks!

Sorry i'm running a mile a minute here and piling so much on . . . . it's not really urgent, but need to get it off my desk! mims

Mary Christina Wood
Philip H. Knight Professor
Faculty Director, Environmental and
Natural Resources Law Program
University of Oregon School of Law
1515 Agate St.
Eugene, OR 97403-1221
(541) 346-3842
mwood@law.uoregon.edu

Begin forwarded message:

From: [redacted]
Date: April 3, 2012 11:01:21 AM PDT
To: [redacted], mwood@law.uoregon.edu, [redacted], [redacted]
Cc: [redacted]
Subject: **SW Climate Assessment announcement**

Attached. Strange process for soliciting tribal input. See Chapter 17

~~~>-))))o>~~~ ><((((º>
Gary S.Morishima
Ph: 206.236.1406; Cell [redacted]

In a message dated 3/21/2012 2:19:23 P.M. Pacific Daylight Time, KMCCOY@quinault.org writes:

> Hi All,
>
> We've changed the conference call information. The date and time are the same, but the call-in number and pass code have been changed. Please see below.
>
> Date: Tuesday, April 3
>
> Start Time: 10:00 am PST
>
> Dial-in Number: [redacted] or [redacted]
>
> Participant Code: [redacted]
~~~

Thanks,

Kenny McCoy

Land Acquisition Forester

Quinault Division of Natural Resources

PO Box 189 – 1214 Aalis

Taholah, WA 98587

(360) 276-8215 Ext 476

From: McCoy, Kenny
Sent: Tuesday, March 20, 2012 12:57 PM
To: Mary Wood (mwood@law.uoregon.edu); [redacted]; Eldridge, Nancy; 'Seth Pilsk'
Cc: ITC Program Manager <[redacted] ([redacted])
Subject: RE: Conference Call to Discuss ITC Workshop

Hi All,

Thanks to everyone for taking the time to fill in the Doodle Poll. The conference call will take place on Tuesday April 3rd from 10:00-11:00am. The call-in instructions are below.

Dial-in Number: [redacted]

Participant Access Code: [redacted]

Participants must dial # after they enter the code.

If you have any questions, please don't hesitate to call me. Also, Laura Alvidrez, ITC Program Manager, will be joining us during the conference call to help answer questions about logistics.

Thanks,

Kenny McCoy

Land Acquisition Forester

Quinault Division of Natural Resources

PO Box 189 – 1214 Aalis

Taholah, WA 98587

(360) 276-8215 Ext 476

From: McCoy, Kenny
Sent: Wednesday, March 14, 2012 9:52 AM
To: Mary Wood (mwood@law.uoregon.edu); [redacted]; Eldridge, Nancy; 'Seth Pilsk'
Cc: ITC Program Manager [redacted] ([redacted])
Subject: Conference Call to Discuss ITC Workshop

Hi All,

I'd l ke to schedule a conference call sometime during the week of March 26th - 30th to discuss the objectives and logistics of our upcoming workshop at this year's National Indian Timber Symposium (May 14th – 17th). In order to ensure there will be no overlap between presentations, I want to give each of you an opportunity to briefly describe how you plan on tackling your topics. The ITC Program Manager will be sending out speaker confirmation letters that will include symposium registration information. The Symposium Agenda/Packets should be finalized and mailed out in the next few weeks.

For your convenience, I've attached the workshop agenda and symposium lodging Information.

Please take the time to fill in the Doodle Poll by clicking on the link below.

http://www.doodle.com/t3bs8ei99apun5gc

Thanks,

Kenny McCoy

Land Acquisition Forester

Quinault Division of Natural Resources

PO Box 189 – 1214 Aalis

Taholah, WA 98587

(360) 276-8215 Ext 476

OR Announcem
ent 02...12.pdf

Announcement - Open Review, your comments requested

The Southwest Climate Alliance welcomes your comments on a DRAFT version of the **Assessment of Climate Change in the Southwest United States: A Technical Report Prepared for the U.S. National Climate Assessment**

When?

The open review period **starts at 12 p.m. (PDT) Wednesday, March 28, 2012, and ends at 11:59 p.m. (PDT) Wednesday, April 11, 2012**. Comments will not be accepted after 11:59 p.m. (PDT) on April 11, 2012.

What kind of documents will you be reviewing?

Written chiefly during late 2011, with revisions in early 2012, this report provides a snapshot of the current state of climate change information and knowledge related to the U.S. Southwest region. The region covers six states—Arizona, California, Colorado, Nevada, New Mexico, and Utah—an area that includes vast stretches of coastline, an international border, and the jurisdictions of nearly two hundred Native Nations. In 20 chapters, the report looks at the links between climate, regional resources, energy, transportation, and other key sectors. It also examines vulnerabilities to climate as well as adaptation choices available to our region's inhabitants.

Chapter 1: Summary for Decision Makers
Chapter 2: Overview
Chapter 3: The Changing Southwest
Chapter 4: The Weather and Climate of the Southwest United States
Chapter 5: Evolving Weather and Climate Conditions of the Southwest United States
Chapter 6: The Southwest Climate of the Future—Projections of Mean Climate
Chapter 7: The Southwest Weather and Climate Extremes of the Future
Chapter 8: Natural Ecosystems
Chapter 9: Coastal Issues
Chapter 10: Water Impacts
Chapter 11: Agriculture and Ranching
Chapter 12: Energy Impacts
Chapter 13: Urban Areas
Chapter 14: Transportation
Chapter 15: Health Effects of Climate Change in the Southwest
Chapter 16: Impacts of Future Climate Change in the Southwest on Border Communities
Chapter 17: Unique Challenges Facing Southwestern Tribes: Impacts, Adaptation, and Mitigation
Chapter 18: Climate Choices for a Sustainable Southwest
Chapter 19: Moving Forward with Imperfect Information
Chapter 20: Research Strategies for Addressing Uncertainties

This technical input document does not represent a federal document of any kind and should not be interpreted as the position or policy of any federal, state, local, or tribal government or non-governmental entity.

What type of review is this?

The editors and authors of this document are specifically seeking substantive and constructive comments regarding the content of the report and the evidence cited by the authors to support their assessments. Specific comments must reference specific page and line numbers within a chapter; however, overarching comments may be applied to the entire chapter. We welcome suggestions for the inclusion of additional data and/or references and require that you submit complete bibliographic reference citations. If you suggest URL links, they must point to a specific dataset, citation, or document, in contrast to pointing to the home page of a generalized source of data or documents. **All reviewer comments, reviewer names and affiliations, and author responses will be made publicly available through the review website at the time of publication of the final report, scheduled for August 2012.**

How to participate in the open review:

The open review will be held online at http://swcarr.arizona.edu. You will be asked to create a login requiring your email address, full name, and affiliation. We require your email address to deliver your password, while your full name and affiliation will be associated with your comments and author responses in the public record. You will be able to download individual chapters in PDF format, and enter your chapter-specific comments using an online form. The FAQ page of the website will provide instructions for the online review process.

From: **Mary Wood** mwood@uoregon.edu
Subject: Re: This week: Climate Accountability Workshop
Date: June 13, 2012 at 12:39 PM
To: Alison Kruger [redacted]

MW

thanks for the advice!

Mary Christina Wood
Philip H. Knight Professor
Faculty Director, Environmental and
Natural Resources Law Program
University of Oregon School of Law
1515 Agate St.
Eugene, OR 97403-1221
(541) 346-3842
mwood@law.uoregon.edu

On Jun 13, 2012, at 11:57 AM, Alison Kruger wrote:

> Good morning,
>
> Thank you for your question. While no conference attire has been set, business casual or business formal would be a safe bet.
>
> For the dinner at Lew's, people may be dressed more casually - sweater and slacks.
>
> We're here already, and surprised at how cold it can be outside - at all times of day. The jacket or sweater for meals outside, or even just walking around, is a must!
>
> Please call if any other questions arise - I'll be out and about for the rest of today. Cell: [redacted].
>
> Best,
> Alison
>
> ---
>
> **From:** Mary Wood [mwood@uoregon.edu]
> **Sent:** Wednesday, June 13, 2012 2:54 PM
> **To:** Alison Kruger
> **Subject:** Re: This week: Climate Accountability Workshop
>
> Thanks Alison - is the dress for the workshop formal or informal? Mary
>
> Mary Christina Wood
> Philip H. Knight Professor
> Faculty Director, Environmental and
> Natural Resources Law Program
> University of Oregon School of Law
> 1515 Agate St.
> Eugene, OR 97403-1221
> (541) 346-3842
> mwood@law.uoregon.edu
>
> On Jun 11, 2012, at 7:28 AM, Alison Kruger wrote:
>
> > <image005.jpg> <image006.jpg>

Workshop on Climate Accountability, Public Opinion, and Legal Strategies
Scripps Institution of Oceanography, La Jolla, California
14-15 June 2012

Dear Participants:

We are looking forward to seeing you at the Climate Accountability Workshop and greatly appreciate the time you've taken out of busy schedules to join us. We anticipate animated and informative dialogue with colleagues who bring diverse experience and expertise to our goal of drawing upon the history of tobacco control as a model for possible progress on the issue of controlling climate change.

All of you should have received from Alison Kruger core preparatory materials and information, including: a participants list, draft agenda, request for a short bio (100-300 words), request for suggestions of key papers, reminder to coordinate regarding presentation slides, note on confidentiality guidelines for the workshop, and information on accommodations at the La Jolla Shores Hotel and transport from the airport (https://www.supershuttle.com/default.aspx?GC=UCSUS).

If you have any remaining logistical questions, please let Alison know.

Thursday evening June 14, Connie and Lewis Branscomb have graciously arranged to entertain all participants to a dinner, on behalf of and sponsored by UCS, at their home. Dinner will be served on their deck overlooking the ocean. Transportation by van has been arranged from the La Jolla Shores Hotel, leaving promptly at 6:15 pm. Wine will be served at 6:30, dinner will be at 7:30.

As Thursday dinner and workshop lunches will be served outdoors, oceanfront, we recommend bringing a jacket or sweater.

Safe travels to La Jolla!

Yours truly,

Naomi Oreskes (noreskes@ucsd.edu)
University of California, San Diego

Peter C. Frumhoff ([redacted])
Union of Concerned Scientists

Richard Heede ([redacted])
Climate Accountability Institute

Lewis M. Branscomb (lbranscomb@ucsd.edu)

Scripps Institution of Oceanography

Angela Anderson ([redacted])
Union of Concerned Scientists
<This week - Climate Accountability Workshop.docx>

Union of Concerned Scientists
Citizens and Scientists for Environmental Solutions

SCRIPPS INSTITUTION OF OCEANOGRAPHY
GLOBAL DISCOVERIES FOR TOMORROW'S WORLD

Workshop on Climate Accountability, Public Opinion, and Legal Strategies
Scripps Institution of Oceanography, La Jolla, California
14-15 June 2012

Dear Participants:

We are looking forward to seeing you at the Climate Accountability Workshop and greatly appreciate the time you've taken out of busy schedules to join us. We anticipate animated and informative dialogue with colleagues who bring diverse experience and expertise to our goal of drawing upon the history of tobacco control as a model for possible progress on the issue of controlling climate change.

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If you have any remaining logistical questions, please let Alison know [redacted].

Thursday evening June 14, Connie and Lewis Branscomb have graciously arranged to entertain all participants to a dinner, on behalf of and sponsored by UCS, at their home. Dinner will be served on their deck overlooking the ocean. Transportation by van has been arranged from the La Jolla Shores Hotel, leaving promptly at 6:15 pm. Wine will be served at 6:30, dinner will be at 7:30.

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Yours truly,

Naomi Oreskes (noreskes@ucsd.edu)
University of California, San Diego

Peter C. Frumhoff ([redacted])
Union of Concerned Scientists

Richard Heede ([redacted])
Climate Accountability Institute

Lewis M. Branscomb (lbranscomb@ucsd.edu)
Scripps Institution of Oceanography

Angela Anderson ([redacted])
Union of Concerned Scientists

From: [redacted]
Subject: UCS meeting - La Jolla
Date: May 9, 2012 at 12:05 AM
To: Mary Wood mwood@uoregon.edu

Hi Mary,

I noticed your name on a list of people that may ne going along to a meeting being organized by UCS on climate litigation. Is this the case? Are you going?

I have also been invited and would be great to meet you there....

Steve

Sent from my BlackBerry® smartphone on 3

From: **Canon Luerkens** canon@uoregon.edu [redacted]
Subject: UPDATED: CV
Date: April 10, 2012 at 3:19 PM
To: Morgan Wood mwood@uoregon.edu

CL

Mims,

Here you go. I made the changes you asked for. I'll print two copies and put them under your door.

-Canon

MW.CV.
4.10.12.doc

Mary Christina Wood
Philip H. Knight Professor
Faculty Director, Environmental and
Natural Resources Law Program
University of Oregon School of Law
Eugene, OR 97403-1221
(541) 346-3842

EMPLOYMENT
1992-present

University of Oregon Law School, Eugene, OR
Professor of Law, March, 2002-present
Faculty Director, Environmental and Natural Resources Law Program, 2009-present
Luvaas Faculty Fellow, 2007-2008
Morse Center for Law & Politics Resident Scholar 2006-2007
Dean's Distinguished Faculty Fellow 2005-2006
Associate Professor, 1996-2002
Assistant Professor, 1992-1995
Transition Director, Environmental and Natural Resources Law Program, 2005
Founding Director, Environmental and Natural Resources Law Program, 2003

Courses:
Property Law, Hazardous Waste Law, Public Lands Law, Wildlife Law, Indian Law, Natural Resources Law, Public Trust Law

Honors, awards, grants:

- Research Innovation Award 2010
- Summer Research Grant Awards 2005-20011
- Luvaas Faculty Fellow, 2007-2008
- Morse Center for Law and Politics Resident Scholar 2006-2007
- Morse Center for Law and Politics Project Grant, 2005
- Columbia River Inter-Tribal Fish Commission Partnership Award, 2005 (shared)
- Clark County Sammy Award for Conservation (shared), 2005
- Love, Moore, Banks and Grebe Faculty Fellow, 2004-2005
- External Pilot Program Award, 2004
- Alfred T. Goodwin Faculty Fellowship Award, 2003
- Orlando J. Hollis Award for Distinguished Teaching, 2002
- University of Oregon Appropriate Dispute Resolution Scholarship Grant, 2001
- University of Oregon Appropriate Dispute Resolution Teaching Grant, 2001
- University of Oregon Summer Research Award, 2001
- John L. Luvaas Summer Research Fellowship, 1996
- University Ersted Distinguished Teaching Award, 1994
- University of Oregon Summer Research Grant, 1994

Service:

- Judicial Clerkship Committee, 2011-2012
- Dean's Search Committee, 2010-2011
- Personnel Committee, 2010-2011
- Food Justice, Security & Sustainability Conference Steering Committee, 2010-2011
- University Summer Research Awards Committee, 2009-2011, 2001-02
- Environmental Issues Committee, Member, 2008-2010
- Oregon Tribes Visitorship Committee, Chair, 2008-2009
- President's Native American Advisory Board, 2000-present
- Wayne Morse Center Advisory Board, 2002-2007, 2009-2011

- Tuition Model Committee, Member, 2007-2008
- University Fund For Faculty Excellence Selection Committee, Member, 2007-2009
- Dean's Faculty Advisory Committee (DFAC), 2006-2007, 2001-2002, 1997-1998
- Faculty Personnel Committee, Chair, 2006-2007; Member, 1996-1998, 2007-2010
- Carbon Group, Chair, 2006-2007
- Appointments Committee, Chair, 1999; Member 2001-2002, 2004-2005
- Admissions Committee, Chair, 2002-2004; Member 1994-1995
- Dean's Search Committee, 1996-1997
- Lectures and Awards Committee, Chair, 2000-2002
- Law School Financial Aid Committee, 2001-2002
- Hollis Scholarship Committee, 2000-2005
- Dean's Merit Raise Committee, 2000
- Judicial Clerkship Advisory Committee, 1994-2005; Founding Chair and Member, 1994-2005
- Curriculum Committee, 1993-1994
- Wayne Morse Chair Visit Planning Committee, 1994
- University Williams Council, 1999-2005
- University Environmental Studies Committee, 1993-present
- University Financial Aid Appeals Board, 2000-2001
- Many Nations Longhouse Advisory Board, 2002-present
- Longhouse Users Group, 1997-1998
- University Distinguished Teaching Awards Committee, 1996
- Externship Supervisor, 1994-present
- Good Food Club, Founder and Faculty Advisor, 2010 - present
- ENR Program, 1992-present
  (student advising, program development, newsletter, GTF supervisor, admissions support, alumni development, speakers series)
- Journal of Environmental Law & Litigation (JELL), Faculty Advisor, 2003-2005, 2000, 1992-1998
- Native American Law Student Association Advisor, 1999-present
- Animal Rights Student Association Advisor, 1996
- Sustainable Land Use Project, ENR Program, Project Leader, 2005-present
- Conservation Trust Law Project, ENR Program, Project Leader, 2003-present
- Native Environmental Sovereignty Project, ENR Program, Project Leader, 2003-present
- Stanford Environmental Law Conference 2000, Advisory Board, Member, 1999-2000

1991 **U.S. Department of Interior, Office of the Solicitor, Portland, OR**
Assistant Special Counsel to U.S. Fish and Wildlife Service for Endangered Species Act "God Squad" exemption proceedings involving the northern spotted owl

1988-1991 **Perkins Coie, Seattle, WA and Portland, OR**
Attorney in environmental department of both the Seattle and Portland offices

1987-1988 **U.S. Court of Appeals, Ninth Circuit**
Judge Procter Hug, Jr.
Judicial clerkship

EDUCATION **Stanford Law School**
J.D., June, 1987
Class Secretary and Alumni Correspondent, 1987-1997
Environmental Law Society
Executive vice-president, 1985-1986
Environmental Law Journal

Project editor, 1986
Editorial staff, 1986-1987 Journal

University of Washington
B.A., Political Science, Mar. 1984
Honors: Summa Cum Laude
Phi Beta Kappa
Phi Sigma Alpha (Political Science Honor Society)
U of W Certificate of High Scholarship
Alpha Chi Omega Outstanding Scholarship Award

COMMUNITY PROFESSIONAL SERVICE

Western Environmental Law Center
Secretary/Treasurer, Board member, 1993-2005; Advisory Board, 2006-present
Non-profit organization formed to bring citizens' environmental enforcement litigation throughout the West.

Center for Environmental Law and Policy
Climate and Water Advisory Board, 2008-present
Non-profit organization formed to protect and restore the freshwater resources of Western Washington and the Columbia River Watershed.

Climate Legacy Initiative & Climate Legacy Network
Consultant, 2007-2009
Initiative formed to research and promote legal doctrines, principles, and rules appropriate for recognition by courts, legislatures, administrative agencies, and private sector institutions to safeguard present and future generations from harms resulting from global climate change; http://www.vermontlaw.edu/cli/index.cfm?doc_id=1403.

U.S. District Court Historical Society Board of Trustees
Appointed member, 1999-present.

Tribal Water Advocacy Project
Advisory Board, 2003-2007
Non-profit organization exploring Pacific Northwest water issues affecting tribes.

The First Oregonians Advisory Board
Member, 2002-2003
Advisory Board providing advice and editorial assistance for publication of THE FIRST OREGONIANS 2nd ed.

Clinton Forest Plan Province Advisory Committee,
Southwest Washington Province
Appointed member, 1995-1998
Citizens advisory committee formed under federal regulatory procedures to implement the Clinton Forest Plan for the Southwest Washington Province; members appointed by Chief of the Forest Service.

Cascadia Times
Member, Board of Advisors, 1995-2000
Regional newspaper that provides in-depth investigative reporting on environmental issues throughout the Columbia River Basin, Alaska, and Northern California.

Oregon Trout
Board member and member of Resource Council, 1994-1996.
Non-profit organization dedicated to fish conservation in Oregon.

Oregon Water Resources Institute
Board member, 1994-1996
Institute providing grant funding for research related to water resources.

Western Lands Project, Natural Resources Law Center
Member, Advisory Board, 1995
Group convened by the University of Colorado Natural Resources Law Center to provide advice on project exploring sustainable management of western public lands.

Washington State Boundary Review Board for Clark County
Appointed Board member, 1991-1993; Chair, 1992-1993
Five-member quasi-judicial board created pursuant to Washington state law. Reviewed annexations, special service district boundary changes and sewer/water extensions. Conducted public hearings in accordance with the Washington Administrative Procedures Act and rendered decisions reviewable in Superior Court.

PUBLICATIONS

Books, Law Reviews, and Other Scholarship

NATURAL RESOURCES LAW 2nd Edition (with Jan Laitos, Sandi Zellmer and Dan Cole) (West Publishing, forthcoming May, 2012).

NATURE'S TRUST: ENVIRONMENTAL LAW FOR A NEW ECOLOGICAL AGE (Cambridge University Press, forthcoming Fall 2012).

Treatise on Public Trust Law (work in progress with Professor Michael Blumm).

"Atmospheric Trust Litigation Around the World," chapter in FIDUCIARY DUTY AND THE ATMOSPHERIC TRUST (Ken Coghill, Charles Sampford, Tim Smith, eds) (Ashgate Publishing, Australia, January 2012).

"Atmospheric Trust Litigation," in CLIMATE CHANGE READER (W.H. Rodgers, Jr. and M. Robinson-Dorn, eds.) (Carolina Academic Press, 2011).

"Legal Actions to Secure Life Sources for Future Generations," chapter in THREATENED ISLAND NATIONS: LEGAL IMPLICATIONS OF RISING SEAS AND A CHANGING CLIMATE (with Stephen Leonard, Nicola Peart, Daniel Bartz) (forthcoming, Cambridge University Press, fall, 2012)

"The Dawn of Planetary Patriotism: A Citizens' Call to Climate Defense," co-authored with Heather A. Brinton (work in progress).

"'You Can't Negotiate With a Beetle': Environmental Law for a New Ecological Age," Natural Resources Journal, Vol. 50, No. 1 (Spring 2010).

"Promoting the Urban Homestead: Reform of Local Land Use Laws To Allow Microlivestock on Residential Lots," (with Katy Polluconi, Jeremy Pyle and Naomi Rowden) Ecology Law Currents, Volume 37, http://elq.typepad.com/currents/volume-37-2010/ (2010).

"Reform of Local Land Use Laws to Allow Microlivestock on Urban Homesteads," (white paper produced with the Sustainable Land Use Project) submitted to Eugene Climate Action and Energy Project, City of Eugene (March 1, 2010). In the City of Eugene's Food Security Plan available here http://www.eugene-or.gov/portal/server.pt/gateway/PTARGS_0_2_358372_0_0_18/Food%20Security%20Resource%20and%20Scoping%20%20Plan.pdf (May 2010).

"Cambio Climático Y Justicia: Exijamos Su Responsabilidad A Los Gobiernos," 78 Athanor 27 (edited and translated by Francesc Prims and John Mellgren), www.athanor.es (November-December 2009).

Proposed Draft Executive Order on Climate Change (September 2009).

"Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part I): Ecological Realism and the Need for a Paradigm Shift," 39:1 Environmental Law 43 (March 2009).

"Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part II): Instilling a Fiduciary Obligation in Governance," 39:1 Environmental Law 91 (March 2009).

Atmospheric Trust Litigation, chapter in ADJUDICATING CLIMATE CHANGE: SUB-NATIONAL, NATIONAL, AND SUPRA-NATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky, eds.) (Cambridge University Press, 2009).

"Regulating Discharges Into Groundwater: The Crucial Link in Pollution Control Under the Clean Water Act," republished in Agricultural Law Bibliography (Drew L. Kershen, ed.) (April 2009) available at http://nationalaglawcenter.org/bibliography/results/?id=24&page=9 (originally published in Harvard Environmental Law Review, 1988).

"Law and Climate Change: Government's Atmospheric Trust Responsibility," excerpt reprinted in CLIMATE CHANGE LAW: MITIGATION AND ADAPTATION (David R. Hodas, Richard Hildreth, and Gustov Speth, eds.) (Spring 2009, West Publishing) (originally published in the Environmental Law Reporter, September 2008).

"Nature's Trust: A Legal, Political and Moral Frame for Global Warming," reprinted in SOCIAL PROBLEMS (Anna Leon-Guerrero and Kristine Zentgraf, eds.) (January 2009, Sage Publications, Inc.) (originally published in the Boston College Environmental Affairs Law Review, May 2007).

"American Indian Law and Forestry," Encyclopedia of U.S. Indian Policy and Law, Paul Finkleman, ed., CQ Press (2009).

"Law and Climate Change: Government's Atmospheric Trust Responsibility," 10 Environmental Law Reporter (September 2008).

"Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations," Climate Legacy Initiative Project, http://www.vermontlaw.edu/cli/index.cfm?doc_id=1403 (white paper) (May 2008).

"A Framework of China-U.S. Partnership to Address Global Warming," 3 China Environmental and Resource Law Review, Ocean University (Renmin Press, Spring 2008).

"Nature's Trust: Reclaiming an Environmental Discourse," 2 Stratigraphy and Sedimentology of Oil-Gas Basins, Geology Institute of Azerbaijan National Academy of Sciences, Azerbaijan, Russia (Spring 2008).

"Government's Atmospheric Trust Responsibility," Ecotone, Environmental Studies Program, University of Oregon (Spring 2008).

"Tribes as Trustees Again (Part I): The Emerging Tribal Role in the Conservation Trust Movement," 32 Harvard Environmental Law Review 373 (with Zach Welker) (Spring 2008); republished in The Sovereignty Symposium 2008 conference proceedings, http://www.oscn net/sovereignty/default.aspx.

"Tribes as Trustees Again (Part II): Evaluating Four Models of Tribal Participation in the Conservation Trust Movement," 27 Stan. Envtl. L.J. 477 (with Matt O'Brien) (2008); republished in The Sovereignty Symposium 2008 conference proceedings, http://www.oscn.net/sovereignty/default.aspx.

"Government's Atmospheric Trust Responsibility," 2008 California Environmental Law Reporter 1 (February 2008).

"Nature's Trust as a Paradigm for Scientific Input in Policy Decisions," Abstract, Annual Conference of the American Geophysical Union, San Francisco, California (December 2007) (with Alison Burchell, Ed Whitelaw, Bob Doppelt), available at http://www.agu.org/cgi-bin/SFgate/SFgate.

"Government's Atmospheric Trust Responsibility," 22 Journal of Environmental Law and Litigation 369 (2007).

The Presidential Climate Action Project, Chapter 9, "Natural Resources Stewardship" (contributing author) http://www.climateactionproject.com (September 2007); "Nature's Trust: A Paradigm for Natural Resources Stewardship" (white paper) (December 2007).

"Nature's Trust: Reclaiming an Environmental Discourse," Chapter in POLLUTION: POLICIES AND PERSPECTIVES (Institute of Chartered Financial Analysts of India University Press (ICFAI Press), Hyderbad, India, Fall 2007) (originally published by the Virginia Environmental Law Journal, 2007).

"Nature's Trust: A Legal, Political and Moral Frame for Global Warming," 34:3 Boston College Environmental Affairs Law Review (May 2007).

"Nature's Trust: Reclaiming an Environmental Discourse," 25:2 Virginia L. J. (May 2007).

"EPA's Protection of Tribal Harvests: Braiding the Agency's Mission," 34:1 Ecology Law Quarterly (April 2007).

TEACHER'S MANUAL, NATURAL RESOURCES LAW (with Jan Laitos, Sandi Zellmer and Dan Cole) (West Publishing, January 2007).

"Salmon for Sale: Tribes, Treaties, and Fishing Rights," Oregon's Future 34 (Winter 2006).

NATURAL RESOURCES LAW (with Jan Laitos, Sandi Zellmer and Dan Cole) (West Publishing, 2006).

"Restoring the Abundant Trust: Tribal Litigation in Pacific Northwest Salmon Recovery," 36 Environmental Law Reporter, 10163 (2006).

"Indian Forest Laws," Chapter in HANDBOOK OF FEDERAL INDIAN LAW (Lexis/Nexis Publishing 2005).

"The Politics of Abundance: Towards a Future of Tribal-State Relations," 83 Oregon Law Review 1352 (2004).

"Protecting the Wildlife Trust: A Reinterpretation of Section 7 of the Endangered Species Act," 34 Environmental Law 605 (2004).

"The Indian Trust Responsibility: Protecting Tribal Lands and Resources Though Claims of Injunctive Relief Against Federal Agencies," 39 Tulsa Law Review 355 (2004).

"Rennard's Deanship: The Triumph of Axiology," 80 Oregon Law Review 1155 (2001).

"The Tribal Property Right to Wildlife Capital (Part II): Asserting a Sovereign Servitude to Protect Habitat of Imperiled Species," 25 Vermont Law Review 355 (2001).

"The Tribal Property Right to Wildlife Capital (Part I): Applying Principles of Sovereignty to Protect Imperiled Wildlife Populations," 37 Idaho Law Review 1 (2000).

"Judicial Termination of Treaty Water Rights: The Snake River Case," 36 Idaho Law Review 449 (2000) (co-authored with Michael Blumm, Dale Goble, Judith Royster).

"Native Environmental Sovereignty," Open Spaces Magazine (1999).

"Reclaiming the Natural Rivers: The Endangered Species Act Applied to Endangered River Ecosystems," 40 Arizona Law Review 198-286 (1998).

"Environmental Scholarship for a New Millennium," 26 Environmental Law 761-769 (1996).

"Treaty Rights and the Trust Responsibility," Materials for U.S. Fish and Wildlife Service Training Seminars (1996).

"Tribal Management of Off-Reservation Living Resources: Regaining the Sovereign Prerogative," THE WAY FORWARD: COLLABORATION 'IN COUNTRY' (1995).

"Protecting the Attributes of Native Sovereignty: A New Trust Paradigm for Federal Actions Affecting Tribal Lands and Resources," Utah Law Review 109-237 (1995).

"Fulfilling the Executive's Trust Responsibility Toward the Native Nations on Environmental Issues: A Partial Critique of the Clinton Administration's Promises and Performance," 25 Environmental Law 733-800 (1995).

"Indian Land and the Promise of Native Sovereignty: The Trust Doctrine Revisited," Utah Law Review 1471-1569 (1994).

"Environmental Considerations in Estate Planning and Administration," Oregon Environmental & Natural Resources Law News, Vol. VII, no. 1 (co-authored) (May 1992).

"Status of Heirs and Trustees under CERCLA," Oregon State Bar Environmental and Cultural Resources Section (co-authored) (1992).

"Court Finds New Basis of Liability," The National Law Journal, Vol. 13, no. 36 (co-authored) (1991).

"The Toxic Substances Control Act," OREGON ENVIRONMENTAL LAW DESK BOOK (chapter co-authored with Professor Craig Johnston) (1990).

"Regulating Discharges Into Groundwater: The Crucial Link in Pollution Control Under the Clean Water Act," 12 Harvard Environmental Law Review 569-626 (1988).

OTHER PUBLICATIONS

"How to Sue for Climate Change: The Public Trust Doctrine," co-authored with Susan O'Toole, OUTLOOK: Oregon State Bar Environmental and Natural Resources Section Newsletter Vol. 10 No. 2 (Winter 2009).

"Enforcing the Atmospheric Trust Fiduciary Obligation," co-authored with Susan O'Toole, OUTLOOK: Oregon State Bar Environmental and Natural Resources Section Newsletter Vol. 10 No. 2 (Winter 2009).

"Why U.S. President Must Immediately Regulate Carbon Dioxide Under the Clean Air Act," Opinion Editorial with Tim Ream, China Environmental Law Review, Volume 3 (July 2009).

Comments on Nature's Trust Approach submitted to Office of Management and Budget, Federal Regulatory Review, Office of Information and Regulatory Affairs Request for Comments, 74 Fed. Reg. 8819 (February 26, 2009).

"Obama must act now on climate issue," Opinion Editorial with Tim Ream, The Register Guard (January 27, 2009), http://www registerguard.com/csp/cms/sites/web/news/sevendays/5875322-35/story.csp.

"Barack Obama stands at threshold of catastrophic climate change," Opinion Editorial with Tim Ream, straight.com (January 19, 2009), http://www.straight.com/article-194912/barack-obama-stands-threshold-catastrophic-climate-change; also posted at http://earthequitynews.blogspot.com/2009/01/obama-at-threshold-catastrophic-climate html (January 21, 2009); also posted by Coastal Wetland Ecology Information Net at http://blog.163.com/adr_ouc/blog/static/105679286200902184843199/ (January 21, 2009).

"C.E.S. Wood Documentary Premiere—Remarks," Address, Premiere of the PBS documentary, "C.E.S. Wood" (February 7, 2008), Oregon Historical Society, available at: http://ohs.org/education/focus/ces-wood-film-premiere.cfm.

"Government's Atmospheric Trust Responsibility," Feature of the Week, Presidential Climate Action Project, www.climateactionproject.com (re-publication of a keynote address given at the 2007 J.E.L.L. Climate Change Conference) (December 4, 2007).

"Team Up to Tackle Climate Change," Oregon Daily Emerald (November 2, 2007), available at: http://media.www.dailyemerald.com/media/storage/paper859/news/2007/11/02/Opinion/Team-Up.To.Tackle.Climate.Change-3075332.shtml.

"Regaining Nature's Trust," *¡Viva! Mercy Magazine,* Institute of the Sisters of Mercy of the Americas, Silver Spring, MD, http://www.sistersofmercy.org/index.php?option=com_content&task=view&id=950&Itemid=180&lang=en (September/October Edition, 2007).

"Nature's Mandate, Our Obligation," 33: 3 *Down to Earth* 9 *(*Montana Environmental Information Center, September 2007), available at: http://www.meic.org/files/energy/global-warming/NaturesTrust.pdf .

"Nature's Mandate, Our Obligation," Climate Crisis Coalition Newsfeed, http://www.climatecrisiscoalition.org/blog/?m=20070807 (re-publication of a speech given at the 2007 Southwest Renewable Energy Conference) (August 12, 2007).

"Rachel's News # 907: "Discretion or Obligation," available at http://www rachel.org/bulletin/index.cfm?St=4, Montague, Peter and Tim Montague, eds., (May 2007).

"Government and Climate Crisis: Discretion or Obligation?" Eugene Weekly online (May 4, 2007), available at: http://www.eugeneweekly.com/2007/05/10/news1 html.

"Oregon State Legislature's Responsibility to Address Global Warming," Legislative Briefing Packet for Oregon Senate Judiciary Committee, University of Oregon School of Law, Eugene, OR (February 16, 2007).

"Now is Time to Stem Global Warming," Opinion Editorial, Vancouver Columbian (Feb. 9, 2007).

"Demand Global Warming Legislation," Opinion Editorial, Idaho Statesman (Jan. 21, 2007).

"A UN Warning Americans Should Not Ignore," Opinion Editorial, Long Valley Advocate (Feb. 7, 2007).

"Bureaucrats Violate Trust By Ignoring Preservation," Opinion Editorial, The Register-Guard (Jan. 12, 2007).

"Trust in Property Rights to Stem Global Warming," Opinion Editorial, The Star News (Dec. 21, 2006).

"Trophy Home Proposal Dishonors the Nez Perce," The Seattle Times, B9 (Feb. 11, 2004).

"American Indians Feel Sting of Insensitivity," The Eastern Oregonian, 6A (Feb. 15, 2004).

"Wallowa Development Dishonors the Nez Perce," Baker City Herald, 4 (Feb. 10, 2004).

"Proposed Development Would Be 'An Unthinkable Desecration,'" Wallowa County Chieftain, 6 (Feb. 12, 2004).

"Proposed Development Would Be 'An Unthinkable Desecration,'" La Grande Observer (Feb. 12, 2004).

"An Unthinkable Desecration," Ta'c Tito'oquan News, 16 (Feb. 2004).

"No Way To Honor Grave Legacy Of Old Joseph," Lewiston Morning Tribune, 6A (Feb. 11, 2004).

"Wallowa County Considers Unthinkable Desecration of A Sacred Site," The Oregonian, D11 (Feb. 11, 2004).

"Nez Perce Fight An Old Battle Again," The Register-Guard, A11 (Feb. 12, 2004).

"Subdivision Would Add Insult To Tribe's Injury," Spokesman Review (Feb. 11, 2004).

"Reaction to P&Z Threatens the Process," The Star-News (Feb. 25, 1999).

"Valley County P&Z Process Jeopardized by Critics of WestRock Decision," The Long Valley Advocate (Feb. 17, 1999).

"Reclaiming Native Environmental Sovereignty in the Columbia River Basin," 20th Annual Report, Columbia River Inter-Tribal Fish Commission (Aug. 1998).

"Salvage Logging Bill Threatens U.S. Forests," The San Diego Union-Tribune (May 3, 1995) (with Chad Hanson).

"Salvage Logging Bill Seen as Rape--or the Salvation--of Forests," The Oregonian (May 1, 1995) (with Chad Hanson).

"The Gorton-Hatfield Forest Giveaway," The New York Times, Sunday Edition (Apr. 30, 1995) (with Chad Hanson).

"Gorton, Hatfield Pull a Fast One to Benefit Timber Industry," Seattle Post-Intelligencer (Apr. 28, 1995) (with Chad Hanson).

"Bill a Blow to Ecosystems, Democracy," The Eugene Register-Guard (Apr. 25, 1995) (with Chad Hanson).

"Tribal Treaty Victory Helps Save Salmon," The Seattle Times (Sept. 30, 1994).

"It's Electricity Turbines that Kill Northwest Salmon, Not Tribal Fishing," Indian Country Today (Sept. 28, 1994).

"Indian Treaty Rights, Salmon, Do Not Pose Conflict," The Columbian (Sept. 27, 1994).

"Indian Rights Face-Off Avoided," The Eugene Register-Guard (Sept. 18, 1994).

"State Over Its Head as Spill Decision-Maker," The Oregonian (July 15, 1994).

Brief submitted on behalf of the U.S. Fish and Wildlife Service in the Endangered Species Act "God Squad" Proceedings involving the Northern Spotted Owl (250p) (co-counsel with Patrick A. Parenteau and Ron Swan) (Feb. 1992).

STANFORD LAWYER, semi-annual column from 1987 to 1998.

DOCUMENTARIES

"Trust," Witness Organization Documentary Series on Atmospheric Trust Litigation (due out 2012).

"Liberty & Wilderness William O. Douglas Film Project," John Concillo, 2011.

PBS documentary, "C.E.S. Wood" (2008), available at: http://ohs.org/education/focus/ces-wood-film-premiere.cfm.

SPEECHES AND APPEARANCES (selected)

"Climate Accountability Workshop," La Jolla, CA (forthcoming June, 14-15, 2012).

"Protecting Tribal Sovereignty: Federal Environmental Regulation in Indian Country," Thirty-Six Annual National Indian Symposium, Warm Springs, OR (forthcoming May 14th, 2012).

"Environmental Politics Leaderships Discussion," Pi Sigma Alpha National Honor Society of Political Science, University of Oregon (forthcoming April 19th 2012).

Guest lecture, Climate Policy Class , University of Vermont (forthcoming April 12th 2012).

"Taking the Long View When Allocating Water Resources," Panel, 2012 PIELC Conference, University of Oregon School of Law, Eugene, Oregon (March 2, 2012).

"Public Trust and Atmospheric Trust Litigation," Panel, 2012 PIELC Conference, University of Oregon School of Law, Eugene, Oregon (March 3, 2012).

"New Directions in Environmental Law: [Re]Claiming Accountability," Yale Law School, New Haven, Connecticut (February 24-25).

"The Politics of Climate Change," Address, Environmental Politics, Lane Community College, Eugene, Oregon (Feb. 15, 2012).

"Victory Speeches for Climate Crisis," Montana Powershift, Missoula, Montana, (February 18, 2012) (video appearance).

"Green Living-Getting Children Involved," Good Earth Home and Garden Show, Lane County Fairgrounds, Eugene, OR (January 21, 2012).

"Environmental Policy and Law," Address, Environmental Politics, Lane Community College, Eugene, Oregon (October 28, 2011).

Invited Participant, The Commons Law Project Workshop, Burlington, Vermont (October 29, 2011) (by video conference).

Guest Lecture, International Environmental Law, Chapman Law School, Orange, California (October 25, 2011) (by video conference).

"Ethical Dilemmas in a New Ecological Age," Oregon Planning Institute, "Planning with Purpose," Eugene, Oregon (September 15, 2011).

"Local Food Production and Regulation," JELL Symposium, "The Local Revolution: How Relationship and Legal Policies are Creating Sustainable Communities Around the Country," Eugene, Oregon (September 9, 2011).

"Climate and the Law," Panel Presentation, AREDAY Summit, "Putting the Green in Green – Monetizing Carbon in the Global Economy," Aspen, Colorado (August 18-21, 2011).

"Tribes and the Federal Trust Relationship: Thoughts about Its Past, Present, and Future," Panel Presentation, Tribes as Sovereign Governments in an Unstable Political Environment, Native Leadership Forum, Temecula, California (June 2-3, 2011) (paper participation due to flight cancellation).

Tour Commentary, Columbia River Gorge Speaking Tour, Natural Resources Law Teachers Institute, Stevenson, Washington (May 25-27, 2011).

"Legal Remedies of Threatened Island Nations and Future Generations," Presentation, Threatened Island Nations: Legal Implications of Rising Seas and a Changing Climate, Columbia Law School, New York, New York (May 23, 2011) (presented by A. Oposa on behalf of co-authors).

Interview with Viv Benton, "The Good Life," Australia Radio, 3WBC, http://www.wwmn net/2011/05/live-the-good-life-with-the-bentons/ (May 12, 2011).

Environment 2050 Interview with David Rejeski, Director, Science and Technology Innovation Program, Woodrow Wilson International Center for Scholars (April 26, 2011).

"Atmospheric Trust Litigation," Video-conference Keynote Address, "Climate Change Law Conference," University of California, Irvine School of Law, Irvine, California (April 1, 2011).

“Nature’s Trust: Environmental Law for the New Ecological Age,” Address, UC Davis Law Review Symposium: The Public Trust Doctrine, Davis, California (March 4, 2011).

“Alternative Agricultures: Urban Farming & Micro-Ranching,” Panel Presentation, “Food Justice, Security, and Sustainability,” Wayne Morse Center for Law and Politics (February 19-21, 2011).

"Nature’s Trust: Environmental Law for the New Ecological Age," Keynote Address, Ideas Matter Series, Oregon State University, Corvallis, Oregon (February 17, 2011).

“Climate Crisis and Citizenship,” Fort Nightly Club, First Congregational Church, Eugene, Oregon (February 17, 2011).

“The Politics of Climate Change,” Address, Environmental Politics, Lane Community College, Eugene, Oregon (February 15, 2011).

“Microlivestock and the Urban Homestead: Bringing Meat and Dairy to the Neighborhood,” Interview, UO Today, Eugene, Oregon, available at http://media.uoregon.edu/channel/2011/03/21/uo-today-470-mary-wood/ (February 8, 2011).

“Green Living – Getting Children Involved,” Address, Green Home Show, Eugene, Oregon (January 22, 2011).

“Local Food Sovereignty,” St. Mary’s Episcopal Church, Eugene, Oregon (November 3, 2010).

Panel Address, Local and Green Community Conference, Eugene, Oregon (October 30, 2010).

“Climate Change and the Role of Victory Congregations,” Video-Conference Keynote Address, “Planet in Crisis: Mercy Response,” Sisters of Mercy Justice Conference, Biddeford Pool, Maine (October 30, 2010).

"The Politics of Climate Change," Address, Environmental Politics, Lane Community College, Eugene, Oregon (October 27, 2010).

Environmental Politics Class, University of Oregon, Eugene, Oregon (October 27, 2010).

Introduction, Speaker Dr. James Hansen, co-sponsored by the ENR Center and Morse Center for Law & Politics, on Climate Ethics and Equity Theme of Inquiry, UO Law School (October 16, 2010).

"The Planet on Your Docket," Atmospheric Trust Litigation Workshop, University of Oregon (October 15, 2010).

“Urban Homesteading and Microlivestock,” Panel Presentation, Cultivating Our Future: New Landscapes in Food and Agricultural Law and Policy, Journal of Environmental Law and Litigation Symposium, University of Oregon School of Law, Eugene, Oregon (October 1, 2010).

Opening Address, Cultivating Our Future: New Landscapes in Food and Agricultural Law and Policy, Journal of Environmental Law and Litigation Symposium, University of Oregon School of Law, Eugene, Oregon (October 1, 2010).

Interview with Janaia Donaldson for “Peak Moment: Locally Reliant Living for Challenging Times,” available at www.peakmoment.tv/conversations (September 23, 2010).

“The Public Trust in Oceans: The Potential Judicial Role,” Ocean Impacts of Climate Change: Science, People and Policy, Wayne Morse Center for Law and Politics Symposium cosponsored by PISCO: Partnership for Interdisciplinary Studies of Coastal Oceans and the UO School of Law, Eugene, Oregon (September 10, 2010).

Interview with Jose Espinosa for “USA Green Stories,” Voice of America (documentary forthcoming 2011) (June 10, 2010).

“Climate Crisis and Citizenship,” Eugene Rotary Club, Eugene, Oregon (June 8, 2010).

“Urban Homesteading for Kids,” 4J School, Eugene, Oregon (June 8, 2010).

Interview with John Concillo for "William O. Douglas: Liberty and Wilderness," Oregon Cultural Heritage Commission (documentary forthcoming 2011) (June 2, 2010).

Official testimony on Microlivestock Ordinance before the Eugene City Council, Eugene, Oregon (May 24, 2010).

"The Politics of Climate Change," Address, Environmental Politics, Lane Community College, Eugene, Oregon (April 30, 2010).

"How the International Law of Badminton Saved Endangered Species Habitat," Address, "Crisis and Collaboration: Environmental Decision Making in a Rapidly Changing Landscape" A Series of Fireside Conversations, Eugene, Oregon (April 21, 2010).

Moderator, "Climate Legislation Forum," Climate Crisis Working Group, Eugene, Oregon (April 7, 2010).

"Climate Change and Food Security," Address, Lane County Food Policy Council, Eugene, Oregon (April 6, 2010).

Panelist, "Intergenerational Equality and Climate Change: Saving the Planet for Future Generations," Wayne Morse Center for Law and Politics Symposium, Eugene, Oregon (March 11, 2010).

"Actions by Individuals, Businesses, NGO's, and Governmental Bodies," Panel Presentation, "Globalization, Economic Justice, and Climate Change," 2010 Trina Grillo Retreat, Eugene, Oregon (March 7, 2010).

"The Public Trust: 1,500 Years Old and Still Kicking," Panel Presentation, "Recover Renew Reimagine," 28th Annual Public Interest Environmental Law Conference, Eugene, Oregon (February 26, 2010).

"Climate Change and Food Security," Panel Presentation, City of Eugene Food Security Town Hall, Eugene, Oregon (February 17, 2010).

"Raising Citizens Not Consumers," Good Earth Home Show, Eugene, Oregon (January 23, 2010).

"Government's Atmospheric Trust Responsibility," Climate Ethics and Law Class, University of Oregon, Eugene, Oregon (November 23, 2009).

"Atmospheric Trust Litigation: A Strategy to Fight Climate Change," Video-Conference Keynote Address, ART Climate Workshop, RMIT University, Melbourne, Australia (November 23, 2009).

"People-powered Politics," Keynote Address, Powershift West Rally, Eugene, Oregon (November 8, 2009).

"Agribusiness and Local Farming: The Effects of Food on Climate Change," Panelist, Powershift West Summit, University of Oregon, Eugene, Oregon (November 7, 2009).

"Political Action, Youth Empowerment," Panelist, Powershift West Summit, University of Oregon, Eugene, Oregon (November 7, 2009).

"Victory Speakers," Journalism Class, University of Oregon, Eugene, Oregon (November 3, 2009).

"350! Artists for Climate Action," Hult Center, Eugene, Oregon (October 24, 2009).

"Climate Policy: What if Politics Fail Us?," Dialogue with James McCarthy and Dale Jamieson, Wayne Morse Center for Law and Politics, University of Oregon School of Law, Eugene, Oregon (October 22, 2009).

"Nature's Trust as a Paradigm Shift in Environmental and Natural Resources Law," Video-conference Address, Georgetown Environmental Workshop (October 8, 2009).

Dialogue Participant, "Community Conversation on the Ethics of Climate Change," Community Philosophy Institutes, University of Oregon Philosophy Department, Eugene, Oregon (October 3, 2009).

"Climate Crisis and Citizenship," Emerald Empire Kiwanis Club, Eugene, Oregon (September 17, 2009).

Panel Moderator, Journal of Environmental Law and Litigation Symposium, University of Oregon School of Law, Eugene, Oregon (September 11, 2009).

"The Environment as a Public Trust: Climate Change & Planetary Solutions for Survival," interview with Sue Supriano, http://www.suesupriano.com/article.php?&id=157 (July 13, 2009); distributed on WINGS (Women's International News Gathering Service), http://www.wings.org/ (July 26, 2009).

"Nature's Trust and Planetary Patriotism," Address, Grade School History Club, University of Oregon, Eugene, Oregon (June 3, 2009).

"Victory Congregations: Voicing the Sacred Trust Covenant in Climate Defense," Address, St. Thomas More Newman Center, Eugene, Oregon (May 19, 2009).

"The Politics of Climate Change," Address, Environmental Politics, Lane Community College, Eugene, Oregon (May 4, 2009).

"Victory Congregations: Voicing the Sacred Trust Covenant in Climate Defense," Earth Sunday Address, First United Methodist Church, Eugene, Oregon (May 3, 2009).

"Environmental Benefits of Local Food Production," Address, Church Women United, First United Methodist Church, Eugene, Oregon (April 3, 2009).

"A Trust Paradigm for a New Presidency," Presentation, Beyond the Discrimination Frame: Effective Strategies for Redress in the 21st Century Symposium, Henderson Center for Social Justice, UC Berkeley School of Law, Berkeley, California (March 13, 2009).

Opening Remarks and Introductions, Climate Crisis Working Group, Harris Hall, Eugene, Oregon (March 11, 2009); Forum aired on Community Television of Lane County, Cable Channel 29 (April 15 & 22, 2009).

"The Politics of Climate Change," interview with Laurie Mercier, KBOO 90.7FM, http://kboo.fm/node/12479 (March 2, 2009).

"The Trust Approach to Environmental Decision Making," Presentation, Public Interest Environmental Law Conference, University of Oregon School of Law, Eugene, Oregon (February 27, 2009).

Interview with Kelly Matheson for "Environment is Life: Voices from Human Rights Activists Around the World", available at http://hub.witness.org/EarthDay2009 (February 26, 2009).

"Perfection v. Survival: A Lawyer's Role in the Age of Global Warming," Address, Environmental and Land Use Section of the Lane County Bar Association, University of Oregon School of Law, Eugene, Oregon (February 25, 2009).

"The Climate Victory Speakers," Address, League of Women Voters, Eugene, Oregon (February 19, 2009).

"A Political Paradigm for the New Administration," Address, Environmental Politics, Lane Community College, Eugene, Oregon (February 17, 2009).

"Bridging Law and Science in the Face of Climate Emergency," Address, "Sustainable Solutions," A Series of Fireside Conversations on Global Warming, University of Oregon, Eugene, OR (February 12, 2009).

"Carbon-Cutting for Your Future," Address, Edgewood Community School, Eugene, Oregon (December 11, 2008).

“Act Locally, Think Globally: How Nature’s Trust Can Seed Relocalization and Pollinate Planetary Patriotism,” Address, Post Carbon Eugene, Eugene, OR (December 10, 2008).

"Tribal History and U.S. History," Address, Grade School History Club, University of Oregon, Eugene, Oregon (December 2, 2008).

“Government's Atmospheric Trust Obligation," Address, Environmental Planners and Policymakers, University of Oregon, Eugene, OR (November 21, 2008).

Public Trust Workshop, Northwest Environmental Defense Center, Westwind Camp, OR (October 11, 2008).

“The Atmosphere and the Public Trust: Atmospheric Trust Litigation,” Keynote Address, Reunion Weekend, University of Oregon School of Law, Eugene, OR (October 10, 2008).

Climate Briefing to Lane County Commissioners, Eugene, OR (September 17, 2008).

“Federal Indian Law and Policy,” Video Seminar for US Department of Agriculture, Washington, DC (August 26, 2008).

“Idaho’s Atmospheric Trust Obligation,” Public Keynote Address, Sponsored by the Green LEEDers, Boise, ID (August 21, 2008).

Interview with Gavin Dahl, Boise Community Radio, 89.9FM, http://radioactivegavin.wordpress.com/2008/08/26/no-time-for-passive-lawmakers/ (August 21, 2008).

Climate Briefing to Idaho State Legislators and Community Leaders, Boise, ID (August 21, 2008).

“The Planet on Your Docket,” Keynote Address, Montana Trial Lawyers Association, Flathead Lake, MT (August 7, 2008).

Interview with Viv Benton, “The Good Life,” Australia Radio, 3WBC, http://www.3wbc.org.au/viv_benton.shtml, (July 25, 2008).

“The Atmosphere and the Public Trust,” Address to US Fish and Wildlife Service Supervisors Meeting, video-conference to Monterey, CA (June 24, 2008).

"Taking Back Tomorrow: Why Children Should Take a Stand Against Global Warming," Address, Eugene Middle Schools, filmed by Art for the Sky, http://www.inconcertwithnature.com/, Eugene, OR (June 6, 2008).

“United States v. Oregon: A Forty Year Retrospective,” Keynote Address, Portland, OR (May 28-29, 2008).

“Saved by the Salmon,” Sammy Awards, Keynote Address sponsored by Clark County, Vancouver, WA (May 15, 2008) (televised cable).

“Nature’s Trust: A Global Paradigm for Managing Natural Resources,” Address, Lane Community College, Eugene, OR (May 5, 2008) (televised cable).

Interview with Marty Matsche and Andy Derringer for forthcoming documentary, www.ecocycle.org (April 23, 2008).

Interview with Jason Bradford, “NPR’s The Reality Report,” KZYX, http://www kzyx.org/joomla/, Mendocino County, CA (April 14, 2008), available at http://globalpublicmedia.com/the_reality_report_mary_wood_on_government_as_the_trustee_of_common_assets; Interview featured in Post Carbon Newsletter 38 (April 2008), available at http://postcarbon.org/news/newsletters/apr2008.

“Tribes as Trustees: The Emerging Role in the Global Conservation Trust Movement,” Panel Presentation, Public Interest Environmental Law Conference, Eugene, OR (March 8, 2008).

"The Treaty Culvert Case: Implications for the Future," Panel Presentation, Public Interest Environmental Law Conference, Eugene, OR (March 7, 2008).

"Stabilizing the Atmosphere: Legislative & Agency Responses to Global Warming," Panel Presentation, Public Interest Environmental Law Conference, Eugene, OR (March 7, 2008).

"Using the Energy of the Law to Change the Energy of the World," Panel Presentation, US-UK Video-linked Panel, Public Interest Environmental Law Conference, Eugene, OR (March 7, 2008).

"Atmospheric Trust Litigation," Workshop, Public Interest Environmental Law Conference, Eugene, OR (March 6, 2008).

"Public Trust: Tapping the Potential of the Common Law Trust," Panel Presentation, Public Interest Environmental Law Conference, Eugene, OR (March 6, 2008).

"Aspiring Towards Global Peace Through Nature's Trust Principles," Lane Peace Center's Peace and Democracy Conference, Lane Community College, Eugene, OR (February 29, 2008).

"Nature's Trust: A Legal Paradigm for Protecting Land and Natural Resources for Future Generations," Keynote Address, The Triumph or Tragedy of the Commons, The Spring Creek Project for Ideas, Nature, and the Written Word, Oregon State University, Corvallis, OR (February 28, 2008).

"Law and Climate Change: Government's Atmospheric Trust Responsibility," Keynote Address, Video-conference, University of Montana, Missoula, MT (February 19, 2008); Keynote Address aired on Missoula Community Access Television, Channel 7 in Missoula and 8 in Grant Creek, (March 12 & 14, 2008).

Interview with Sally Mock, "NPR's Montana Evening Edition," KUSM, http://www mtpr net/programs/2008-02-19, Missoula, MT (February 19, 2008).

"Victory Speakers for Climate Crisis: Voicing Government's Obligation," Public Address, Eugene City Public Library, Eugene, OR (February 17, 2008).

Interview with Hosts Andrew Bartholomew and Claude Offenbacher, "Sunday at Noon," KLCC, http://www klcc.org/ OnlineAudio.asp, Eugene, OR (February 17, 2008).

"Advancing Climate Solutions in Business, Law, Design, and Public Health: How You Can Do Activism in Your Career," Panel Presentation, Cascade Power Shift, University of Oregon, Eugene, OR (February 9, 2008).

"C.E.S. Wood Documentary Premiere—Remarks," Address, Premiere of the PBS documentary, "C.E.S. Wood" (February 7, 2008).

"Nature's Trust: A Legal, Political, Economic, and Moral Frame for Global Warming," Keynote Address, American Fisheries Society, Idaho chapter, Annual Meeting (February 5, 2008).

"Remarks at the Unveiling of the Portrait of Chief Joseph," Address, Unveiling of Chief Joseph, University of Oregon School of Law, Eugene, OR (February 1, 2008).

Global Warming Focus Group, McCall, Idaho (January 3, 2008).

"The Draft No One is Telling You About: Global Warming and Your Future," Address to McCall-Donnelly High School and Elementary School Environmental Sciences Classes, McCall, Idaho (December 2007).

Team Up to Tackle Climate Change, Motivational Speech, Step It Up 2007 Global Warming Rally, Eugene, Oregon (November 3, 2007), available at http://stepitup2007.org/article.php?id=682.

"Government's Atmospheric Trust Responsibility," Keynote Address, J.E.L.L. Climate Change Conference, University of Oregon, Eugene, OR (October 19, 2007).

"EPA's Protection of Tribal Harvests: Braiding the Agency's Mission," Keynote Address, Native Environmental Sovereignty Project: Annual Rennard Strickland Lecture Series, Many Nations Longhouse, University of Oregon, Eugene, OR (September 21, 2007).

"Trust Responsibility Doctrine," Workshop Address, Fundamentals of Indian and Tribal Sovereignty: Warm Springs Tribal Council and Committees, Many Nations Longhouse, University of Oregon, Eugene, OR (September 14, 2007).

"Courts as Guardians of the Global Trust," Keynote Address, "Earth on Fire," A Series of Fireside Conversations on Global Warming, Many Nations Long House, University of Oregon, Eugene, OR (August 29, 2007).

"Nature's Trust: A Legal, Economic, Political and Moral Frame for Global Warming," Keynote Address, Southwest Renewable Energy Conference, Boulder, CO (August 1, 2007).

"Nature's Trust and An Ecological Future," Keynote Address, Central Oregon LandWatch, Bend, OR (June 16, 2007).

"Fiddling While Earth Burns: Your Government's Role in Global Warming," Teach-In with Peter Walker, Climate Change Course, Environmental Studies Department, University of Oregon, Eugene, OR (June 7, 2007).

Climate Crisis Q & A Interviews with Jason Gallic, Extreme Arts and Sciences, Eugene, OR (June 6, 2007).

"Government and Climate Crisis: Discretion or Obligation?," Keynote Address, Eugene City Club, Eugene, OR (May 4, 2007).

"Nature's Trust: A Legal, Political and Moral Frame for Global Warming," Keynote Address sponsored by Clark College, Friends of Clark County and Sierra Club, Vancouver, WA (April 21, 2007).

"Business As Usual or Leading a New World? -- Your Role in Global Warming," University Earth Day Address, University of Oregon, Eugene, OR (April 18, 2007).

Global Warming Forum re Mass v. EPA, University of Oregon School of Law, Eugene, OR (April 9, 2007).

"Tribes as Trustees Again," Wayne Morse Center Symposium, University of Oregon School of Law, Eugene, OR (April 6, 2007).

Interview with Carla Castano, Ch. 13 KVAL, Eugene, OR (April 3, 2007).

"Nature's Trust: A Legal, Political and Moral Frame for Global Warming," Keynote Address, 25th Public Interest Environmental Law Conference, University of Oregon School of Law, Eugene, OR (March 2, 2007).

Interview with Sari Gelzer and Kelpie Wilson, 25th Public Interest Environmental Law Conference, University of Oregon School of Law, Eugene, OR (March 2, 2007); Video on Climate Change, http://www.truthout.org/ docs_2006/042507D.shtml (April 27, 2007).

"Emerging Issues in Conservation Easement Law & Practice," Panel Presentation, 25th Public Interest Environmental Law Conference, University of Oregon School of Law, Eugene, OR (March 2, 2007).

Interview with Brian Shaw, host of "The Vocal Majority", 1600 AM KOPT "Oregon's Progressive Talk," Eugene, Oregon (March 1, 2007).

"The Public Trust Doctrine & Climate Change," Pacific Waterkeepers Regional Meeting, University of Oregon School of Law, Eugene, OR (March 1, 2007).

Interview with host Ed Monks, “To Pursue the Truth,” Ch. 29 CCTV, Eugene, Oregon (Feb. 12, 2007).

“Nature’s Trust: A Legal, Political and Moral Frame for Global Warming,” Address, Frank Church Conference, Boise, Idaho (Jan. 22, 2007).

Guest Interview with host Don Wimberley, KBSU, Boise, Idaho (Jan. 22, 2007).

Interview with Fox 12 KTRV-TV, Boise, Idaho (Jan. 22, 2007).

“Nature's Trust and An Ecological Future,” public address for McCall Arts and Humanities Council (dedicated to Nell Tobias), McCall, Idaho (Jan. 10, 2007).

“The Draft No One is Telling You About: Global Warming and Your Future,” address to McCall-Donnelly High School Environmental Sciences Classes, McCall, Idaho (Jan. 4 & 5, 2007).

Welcome Address, Third Annual Northwest Tribal Water Rights Conference, University of Oregon School of Law, Eugene, Oregon (Oct. 27, 2006).

“Nature’s Trust: Reclaiming Environmental Discourse,” Keynote Address, Oregon Bioneers Conference, Lane Community College, Eugene, Oregon (Oct. 20, 2006).

Guest Interview, Northwest Passage with host Tripp Sommer, KLCC, Eugene, Oregon (Oct. 17, 2006).

Guest Interview and Call-In, Jefferson Exchange Radio Program with host Jeff Golden, KRVM, Eugene, Oregon (Sept. 21, 2006).

“Nature’s Trust: Reinventing the Discourse of Environmental Law” Fireside Conversation Series, ENR Program, University of Oregon School of Law (Sept. 20, 2006).

“EPA’s Protection of Tribal Harvests: Braiding the Agency’s Mission,” Keynote Address at EPA Region 10-Tribal Leaders Summit, Umatilla Indian Reservation, Pendleton, Oregon (Aug. 22, 2006).

Taped segment, “Salmon Litigation in Pacific Northwest,” National Public Radio (NPR), KBSU, Boise, Idaho (June, 2006).

"Restoring the Abundant Trust: Tribal Litigation in Pacific Northwest Salmon Recovery," The Idaho Environmental Forum: Exploring the Environmental Puzzle, Forum Number 133, Boise, Idaho (July 12, 2006).

"The Nez Perce Role in Columbia River Basin Salmon Restoration," Co-Sponsored by the National Park Service and the University of Idaho; Nez Perce National Historic Park Lewis and Clark Bicentennial Series, Spalding, Idaho (May 21, 2006).

"Restoring Abundant Fish Runs to Idaho Waters: Tribal Litigation and the Columbia River Basin Hydrosystem," Co-sponsored by the Nez Perce Tribe and the McCall Arts and Humanities Council, McCall, Idaho (Feb. 23, 2006).

"Tribal Homelands and the Promise of Sovereignty: Revisiting the Trust Doctrine," at Sovereignty in Crisis: Tribal Leaders Forum, Las Vegas, Nevada May 27, 2005.

“The Threat to Old Joseph’s Gravesite and Nez Perce Cultural Resources,” Guest Speaker at 10th Annual Coalition Against Environmental Racism (CAER) Environmental Justice Conference, Eugene, Oregon (April 2, 2005).

“The Politics of Abundance: Towards a Future of Tribal-State Relations,” Keynote address at Governor’s State-Tribal Summit, Pendleton, Oregon (Oct. 26, 2004).

“Modern Directions in the Trust Responsibility,” University of Minnesota Law School, Visiting Lecture Series, Minneapolis, Minnesota (Oct. 9, 2004).

"Treaty Rights and Instream Flow Protection," 2004 Northwest Tribal Water law Conference, Eugene, Oregon (Oct. 1, 2004).

"Conservation Easements: A New Overlay to Property," 2004 Public Interest Environmental Law Conference, Eugene, Oregon (Mar. 6, 2004).

"Using the Indian Trust Doctrine to Prevent Environmental Harm to Tribal Lands and Resources," 2004 Public Interest Environmental Law Conference, Eugene, Oregon (Mar. 4, 2004).

"The Trust Responsibility in Indian Law Jurisprudence," Rodgers Distinguished Colloquium Speaker, Arizona State University (Jan. 2004).

"Reinterpreting Section 7 of the Endangered Species Act: The Wildlife Trust Imprint," Lewis and Clark Law School Conference on the Endangered Species Act: 30 Year Anniversary, Portland, Oregon (Oct. 23, 2003).

"The Trust Responsibility of Federal Agencies," Department of Defense Training, Portland State University Institute for Tribal Government, Portland, Oregon (Aug. 27, 2003).

"Origins and Development of the Trust Responsibility: Paternalism or Protection?" Federal Bar Association Indian Law Conference, Albuquerque, New Mexico (Apr. 10, 2003).

"Judicial Review of Politicized Agency Decision-Making: Reforms to the Deference Doctrine," Oregon Chapter of the American Fisheries Society, Eugene, Oregon (Feb. 26, 2003).

2002 J.E.L.L. Symposium Introductory Speaker, University of Oregon School of Law, Eugene, Oregon (Feb. 1, 2002).

"Public Lands and Property Law for Refuge Management," U.S. Fish and Wildlife Service National Employee Training Seminar, Realty 2001 - Resource Protection in the New Millennium, Sunriver, Oregon (Mar. 29, 2001).

"The Changing Face of Public Lands," Keynote address, National Law Enforcement Conference of Assistant U.S. Attorneys, U.S. Department of Justice, Boise, Idaho (Nov. 14, 2000).

"The Political and Moral Meaning of the Trust Responsibility," Keynote address, Environmental Protection Agency National Trust Responsibility Training Conference, San Francisco, CA (Aug. 29, 2000).

"Weighing the Trust Responsibility, Treaty Rights, and Statutory Protections in Environmental Issues Affecting Indian Country," Keynote address, Fifth National Tribal Conference on Environmental Management, EPA sponsored, Florence, Oregon (May 10, 2000).

"The Tribal Property Right to Wildlife Capital: Applying Principles of Sovereignty to a Modern Extinction Crisis," NAELS Conference on Oceans & Environmental Law, Stanford Law School speaker series (Mar. 10-12, 2000).

"An Indian Law Overlay to Federal Public Lands Management," Lecture, Environmental Studies Department, University of Oregon (Feb. 26, 2000).

Interview, "Treaty Rights to Pacific Northwest Salmon," for Living on Earth, National Public Radio (NPR) (Summer, 1999).

"The Native Property Right to Wildlife Populations," Stanford Law School speaker series (Apr. 19, 1999).

"Smoke Signals: A Cultural Context," Winter Film Series, McCall, Idaho (Jan. 14, 1999).

"Federal Responsibilities Towards Native Nations in Implementing the Endangered Species Act," Presentation to Executive Officers and Staff at National Oceanic and Atmospheric Association, Washington, D.C. (Dec. 3, 1998).

“The Federal Trust Responsibility as Applied to USFWS Programs,” Presentation to U.S. Fish and Wildlife Service Officials, USFWS Training Seminar, Klamath Falls, OR (Sept. 15, 1998).

“The Federal Government’s Trust Responsibility to Tribes,” Presentation to Bureau of Indian Affairs Officials, Sacramento, CA (June 4, 1998).

“The Federal Trust Responsibility,” Presentation to National Marine Fisheries Service and U.S. Fish and Wildlife Service Officials, Portland, OR (Apr. 28, 1998).

“Forest Law: An Overview,” Lecture, University of Oregon Biology Department, Eugene, OR (Nov. 24, 1997).

“Tribal Rights on Public Lands,” Lecture, Environmental Studies, University of Oregon, Eugene, OR (Nov. 11, 1997).

“Indians, Time and the Law in the Next Millennium: Reclaiming Environmental Sovereignty,” Native Americans, Time, and the Law Conference, Lewis & Clark Law School, Portland, OR (Oct. 17, 1997).

"Case Study of: HCPs in the Old-growth Forests of the Pacific Northwest," National Conference on Habitat Conservation Plans, Georgetown University Law Center, Washington D.C. (May 17, 1997).

"Gifford Pinchot Forest Management: Old Practices Under a New Name," Washington State University, Vancouver, WA (Apr. 24, 1997).

"Shifting Resources and the Law of Inter-Sovereign Allocation," University of Oregon Geography Department, Eugene, OR (Mar. 5, 1997).

"Understanding the Legal Framework for Forest Management," University of Oregon Biology Department, Eugene, OR (Nov. 26, 1996).

"The State of the Forest—Gifford Pinchot," Presentation before the Clinton Forest Plan Province Advisory Committee, Vancouver, WA (Nov. 21, 1996).

"Shifting Paradigms in Natural Resources Management for a New Millennium," Presentation at Oregon State University, Corvallis, OR (Nov. 19, 1996).

"Land Use Law and the 21st Century: Practices, Policies, and Paradigms," University of Oregon School of Law Commentator & Moderator (Nov. 17, 1996).

"Private Rights on Public Lands," Federal Association of Communications Specialists, Denver, CO (Oct. 1996).

“The Columbia: What has Happened to our River," Conference sponsored by Center for Columbia River History and Fort Vancouver Regional Library, Commentator & Moderator, Vancouver, WA (Sept. 19, 1996).

“A Comparison: Lessons from the Columbia and the Upper Colorado Fish Recovery Efforts,” Seventeenth Annual Summer Conference, University of Colorado School of Law, Boulder, CO (June 9-12, 1996).

“Environmental Scholarship For a New Millennium,” Dinner Speech, Lewis & Clark Law School Annual Law Review Banquet, Portland, OR (Apr. 1996).

“The Clearcut Logging Rider and Pacific Northwest Forests,” Washington State University Earth Day Keynote Address, Vancouver, WA (Apr. 1996).

"Treaty Rights, Trust Responsibility, and the Role of the U.S. Fish and Wildlife Service," Federal Employee Training Seminar, U.S. Fish and Wildlife Service, Portland, OR (Apr. 1996).

"Responding to the Contract with America and Beyond," 1996 Annual Public Interest Law Conference, University of Oregon, Eugene, OR (Mar. 1996).

"The Salvage Logging Rider: A Legal Primer to Lawless Logging," 1996 Annual Public Interest Law Conference, University of Oregon, Eugene, OR (Mar. 1996).

"The Sovereign Underpinnings of Indian Gaming Issues," Presentation to the Governor's Special Task Force on Gaming, Salem, OR (Feb. 1996).

"Logging Without Laws: The Salvage Logging Rider and its Impact on Northwest Forests," University of Oregon Biology Department Lecture, Eugene, OR (Nov. 1995).

"Biodiversity and the Role of Law," University of Oregon School of Law, Eugene, OR (Oct. 1995).

"Sovereign Obligations, The Indian Trust Doctrine and Environmental Decline," University of Oregon Department of Geography, Eugene, OR (Oct. 1995).

"Tribal Management of Off-Reservation Living Resources: Arrangements in the United States," National Native Tribunal, Darwin, Australia (Sept. 26, 1995).

"The Indian Trust Doctrine: Background and Application to Environmental Law," Oregon State Bar Continuing Legal Education Presentation, Indian Law Section, Portland, OR (June 22, 1995).

"The Columbia River Salmon Crisis and the Role of Treaty Rights," 1995 Annual Public Interest Law Conference, University of Oregon Law School, Eugene, OR (Mar. 3, 1995).

"The Indian Trust Doctrine and the Clinton Environmental Policy," Annual Conference of the Association of American Law Schools (AALS) Environmental and Natural Resources Section, New Orleans, LA (Jan. 1995).

"Environmental Justice Issues and Tribal Treaty Rights in Endangered Species Act Implementation," Conference on Environmental Justice, University of Oregon School of Law, Eugene, OR (Jan. 1995).

"Species Conservation and the Federal Trust Responsibility Towards Indian Tribes: The Columbia River Basin Salmon Crisis," Symposium on Marine Wildlife, Lewis & Clark School of Law, Portland, OR (Sept. 1994).

"Charge to the Class," University of Oregon School of Law Graduation Ceremonies, Eugene, OR (May 1994).

"Hazardous Waste Disposal on Indian Reservations: The Government's Trust Obligations," 1994 Annual Public Interest Law Conference, University of Oregon, Eugene, OR (Mar. 1994).

Luncheon Keynote Address, 1994 Annual Public Interest Law Conference, University of Oregon, Eugene, OR (Mar. 1994).

"The Politicization of the Endangered Species Act Exemption Committee Proceedings," University of Oregon School of Law, Eugene, OR (1993).

"The Private Side of CERCLA," 1992 Annual Public Interest Law Conference, University of Oregon, Eugene, OR (Mar. 1992).

"Addressing Indoor Air Pollution Through Real Estate Transactions," Washington State Bar Real Estate Section, Blaine, WA (1990).

"Regulatory Developments in Indoor Air Pollution," Annual Meeting of the Air and Waste Management Association, Portland, OR (1990).

"Legal Ramifications of Indoor Air Pollution," Annual Meeting of the Air and Waste Management Association, Spokane, WA (1989).

INSTRUCTION

"Tribes as Trustees Again (Part I): The Emerging Tribal Role in the Conservation Trust Movement," 32 Harvard Environmental Law Review 373 (with Zach Welker) (Spring 2008); instructional material for "Treaty to Trust to Carcierri: The Economic Future for Indian Lands CLE Conference," Sandra Day O'Connor College of Law at Arizona State University (April 2011).

"Tribes as Trustees Again (Part II): Evaluating Four Models of Tribal Participation in the Conservation Trust Movement," 27 Stan. Envtl. L.J. 477 (with Matt O'Brien) (2008); instructional material for "Treaty to Trust to Carcierri: The Economic Future for Indian Lands CLE Conference," Sandra Day O'Connor College of Law at Arizona State University (April 2011).

"Environmental Law and Alternative Dispute Resolution," Lecture to Alternative Dispute Resolution Masters Program Students, University of Oregon, Eugene, OR (January 26, 2009).

Legislative Briefing to Oregon Senate Judiciary Committee on Global Warming, University of Oregon School of Law, Eugene, OR (February 16, 2007).

U.S. Army Corps of Engineers National Training Program, Environmental Regulation Course, Instructor (2008, 2005, 2004, 2003, 2001, 1999, 1998, 1997, 1996, 1995, 1994, 1993).

"Environmental Laws & Regulations," Seminar for Bureau of Reclamation Employees, Yuma, AZ (Feb. 1999).

"Wildlife Law, Policy, and Administration," Portland State University Public Policy Department (1998).

The Environmental & Natural Resource Law Program, Hazardous Waste Short Seminar, University of Oregon (Oct. 24, 1997).

"The Northwest Power Planning Act: An Overview," Training Workshop for Citizens, Eugene, OR (Oct. 31, 1994).

"Enforcement Issues under the Clean Air Act Amendments of 1990," Clean Air Act Amendments Seminar (sponsored by OMNI Environmental Services), Portland, OR (1991).

Environmental Regulations Course, Executive Enterprises, Instructor (1991).

"Industrial Compliance with the Stormwater Regulations under the Clean Water Act," Stormwater Management Workshop (sponsored jointly by the American Society of Civil Engineers and the American Public Works Association), Portland, OR (1991).

"Overview of Clean Water Act Stormwater Regulations," Annual Western Oregon Regional Wastewater Short School (sponsored by Pacific Northwest Pollution Control Association), Portland, OR (1991).

"Regulation of PCBs under the Toxics Substances Control Act," Pollution Regulation Course at Reed College, Portland, OR (1991).

PEER REVIEW

Peer Review of "Rescuing Wolves form Western Politics: Wildlife as a Public Trust Resource," Science Magazine (June 2011).

Peer Review of Beth Rose Middleton, Trust in the Land: New Directions in Tribal Conservation (University of Arizona Press 2011)

External Reviewer, University of Arizona Press (Summer 2009).

Peer Review of PAGANS IN THE PROMISED LAND: DECODING THE DOCTRINE OF CHRISTIAN DISCOVERY by Steven T. Newcomb, Fulcrum Publishing, Golden, CO (2008).

Peer Review of "Casting the Box Aside: Indigenous-Led Fisheries Innovations in North America" by Ian Record, Manager, Leadership and Management Programs, Native Nations Institute for Leadership, Management and Policy, Udall Center for Studies in Public Policy (February 2008).

Appointment & Tenure Review, Distinguished Professor, Hastings Law School.

Promotion to Full Professor Review, University of California at Santa Cruz

Post-Tenure Review, Oregon State University Professor, Department of Agricultural & Resource Economics.

Tenure Review, Hastings Law School Assistant Professor.

MEDIA COVERAGE

Jervey, Ben, "Young Americans Sue Government to Stop Global Warming, Polluter Interests Granted Intervention to Defend, http://www.desmogblog.com/young-americans-sue-government-stop-global-warming-polluter-interests-granted-intervention-defend (March 4, 2012)

Robinson, Jessica, "Environmentalist Push Climate Change Suits on Behalf of Kids," Northwest Public Radio (March 5, 2012).

Schendler, Auden, "Cigarettes' Lessons for Climate Change," LA Times, http://www.latimes.com/news/opinion/commentary/la-oe-schendler-cigarettes-lessons-for-climate-cha-20120304,0,6134172.story (March 4, 2012).

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PROFESSIONAL AFFILIATIONS Washington State Bar (admitted 1989)
Oregon State Bar (admitted 1990)

From: **Canon Luerkens** canon@uoregon.edu [redacted]
Subject: Re: updated c.v.
Date: April 10, 2012 at 1:10 PM
To: Morgan Wood mwood@uoregon.edu

CL

Mims,

Here is your updated cv.

Please look over the recently added entries. I was a little unsure, for instance, who the climate accountability workshop in La Jolla is associated with. Maybe we can look at this in our meeting, make some changes if need be, and fix it up.

-Canon

From: Mary Wood <mwood@uoregon.edu>
Date: Tue, 10 Apr 2012 11:38:30 -0700
To: Jenn Kepka <canon@uoregon.edu>
Subject: Re: updated c.v.

thanks!!!

Mary Christina Wood
Philip H. Knight Professor
Faculty Director, Environmental and
Natural Resources Law Program
University of Oregon School of Law
1515 Agate St.
Eugene, OR 97403-1221
(541) 346-3842
mwood@law.uoregon.edu

On Apr 10, 2012, at 11:31 AM, Canon Luerkens wrote:

> . . . and sorry I did not say this in the last email, but thank ***you***so much – for the very nice compliment and for always being so grateful for help. I always enjoy doing what I can to help you stay organized and to assist when possible. I wish I could do more.
>
> -Canon
>
> ---
>
> **From:** Mary Wood <mwood@uoregon.edu>
> **Date:** Tue, 10 Apr 2012 10:09:03 -0700
> **To:** Jenn Kepka <canon@uoregon.edu>
> **Subject:** Re: updated c.v.
>
> Canon - you are doing a great job, and I am so very grateful! I don't know how you manage to juggle all you have on your plate. I am one of the luckiest faculty members, because I get to work with you! So, never any apologies!!! Mims
>
> Mary Christina Wood
> Philip H. Knight Professor
> Faculty Director, Environmental and
> Natural Resources Law Program
> University of Oregon School of Law
> 1515 Agate St.

Eugene, OR 97403-1221
(541) 346-3842
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On Apr 10, 2012, at 9:52 AM, Canon Luerkens wrote:

> Mims,
>
> I will get this taken care of as quickly as I can. I am very sorry to have not kept this as up to date as I should have. My excusde is I have been busy, but that's everyone's excuse, so really I don't have good one.
>
> I'll get this to you soon. I'll also get this new version on the web when I can. Let me know if there is anything else I can help with.
>
> -Canon
>
> ---
>
> **From:** Morgan Wood <mwood@uoregon.edu>
> **Date:** Tue, 10 Apr 2012 09:48:49 -0700
> **To:** Jenn Kepka <canon@uoregon.edu>
> **Subject:** updated c.v.
>
> Hi Canon - here is the updated c.v. that you can work with now. I cleaned up the other one and added the information missing on some recent speeches. I'd like to turn in the sab. package to Adell today. Wonder if you could take this c.v. and add the following forthcoming speeches to it (they should be on web too). (I like to add the speeches as soon as they are confirmed, and just put forthcoming on the c.v. - easier for me to keep track that way, and they should add to web at the same time). These are
>
> 1) the university speech that's changed back to the 19th
> 2) university of vermont climate policy class (this thurs)
> 3) tribal speech in may
> 4) workshop in la jolla in june
>
> For each of them, just follow the format precisely as is now on the c.v., as I've cleaned the speech section up. Each needs a date and location, etc. with parentheses and commas following the exact format as it now exists on this version. for the forthcoming speeches just write: (forthcoming, May 14, 2012) or whatever date it happens to be. When you are done, can you send me back a fresh copy for me to keep on my computer and post the new version on the web/ thanks! Really appreciate all your help on this!
>
> Mary Christina Wood
> Philip H. Knight Professor
> Faculty Director, Environmental and
> Natural Resources Law Program
> University of Oregon School of Law
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4.10.12.doc

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EMPLOYMENT
1992-present

University of Oregon Law School, Eugene, OR
Professor of Law, March, 2002-present
Faculty Director, Environmental and Natural Resources Law Program, 2009-present
Luvaas Faculty Fellow, 2007-2008
Morse Center for Law & Politics Resident Scholar 2006-2007
Dean's Distinguished Faculty Fellow 2005-2006
Associate Professor, 1996-2002
Assistant Professor, 1992-1995
Transition Director, Environmental and Natural Resources Law Program, 2005
Founding Director, Environmental and Natural Resources Law Program, 2003

Courses:
Property Law, Hazardous Waste Law, Public Lands Law, Wildlife Law, Indian Law, Natural Resources Law, Public Trust Law

Honors, awards, grants:

- Research Innovation Award 2010
- Summer Research Grant Awards 2005-20011
- Luvaas Faculty Fellow, 2007-2008
- Morse Center for Law and Politics Resident Scholar 2006-2007
- Morse Center for Law and Politics Project Grant, 2005
- Columbia River Inter-Tribal Fish Commission Partnership Award, 2005 (shared)
- Clark County Sammy Award for Conservation (shared), 2005
- Love, Moore, Banks and Grebe Faculty Fellow, 2004-2005
- External Pilot Program Award, 2004
- Alfred T. Goodwin Faculty Fellowship Award, 2003
- Orlando J. Hollis Award for Distinguished Teaching, 2002
- University of Oregon Appropriate Dispute Resolution Scholarship Grant, 2001
- University of Oregon Appropriate Dispute Resolution Teaching Grant, 2001
- University of Oregon Summer Research Award, 2001
- John L. Luvaas Summer Research Fellowship, 1996
- University Ersted Distinguished Teaching Award, 1994
- University of Oregon Summer Research Grant, 1994

Service:

- Judicial Clerkship Committee, 2011-2012
- Dean's Search Committee, 2010-2011
- Personnel Committee, 2010-2011
- Food Justice, Security & Sustainability Conference Steering Committee, 2010-2011
- University Summer Research Awards Committee, 2009-2011, 2001-02
- Environmental Issues Committee, Member, 2008-2010
- Oregon Tribes Visitorship Committee, Chair, 2008-2009
- President's Native American Advisory Board, 2000-present
- Wayne Morse Center Advisory Board, 2002-2007, 2009-2011

- Tuition Model Committee, Member, 2007-2008
- University Fund For Faculty Excellence Selection Committee, Member, 2007-2009
- Dean's Faculty Advisory Committee (DFAC), 2006-2007, 2001-2002, 1997-1998
- Faculty Personnel Committee, Chair, 2006-2007; Member, 1996-1998, 2007-2010
- Carbon Group, Chair, 2006-2007
- Appointments Committee, Chair, 1999; Member 2001-2002, 2004-2005
- Admissions Committee, Chair, 2002-2004; Member 1994-1995
- Dean's Search Committee, 1996-1997
- Lectures and Awards Committee, Chair, 2000-2002
- Law School Financial Aid Committee, 2001-2002
- Hollis Scholarship Committee, 2000-2005
- Dean's Merit Raise Committee, 2000
- Judicial Clerkship Advisory Committee, 1994-2005; Founding Chair and Member, 1994-2005
- Curriculum Committee, 1993-1994
- Wayne Morse Chair Visit Planning Committee, 1994
- University Williams Council, 1999-2005
- University Environmental Studies Committee, 1993-present
- University Financial Aid Appeals Board, 2000-2001
- Many Nations Longhouse Advisory Board, 2002-present
- Longhouse Users Group, 1997-1998
- University Distinguished Teaching Awards Committee, 1996
- Externship Supervisor, 1994-present
- Good Food Club, Founder and Faculty Advisor, 2010 - present
- ENR Program, 1992-present
  (student advising, program development, newsletter, GTF supervisor, admissions support, alumni development, speakers series)
- Journal of Environmental Law & Litigation (JELL), Faculty Advisor, 2003-2005, 2000, 1992-1998
- Native American Law Student Association Advisor, 1999-present
- Animal Rights Student Association Advisor, 1996
- Sustainable Land Use Project, ENR Program, Project Leader, 2005-present
- Conservation Trust Law Project, ENR Program, Project Leader, 2003-present
- Native Environmental Sovereignty Project, ENR Program, Project Leader, 2003-present
- Stanford Environmental Law Conference 2000, Advisory Board, Member, 1999-2000

1991 **U.S. Department of Interior, Office of the Solicitor, Portland, OR**
Assistant Special Counsel to U.S. Fish and Wildlife Service for Endangered Species Act "God Squad" exemption proceedings involving the northern spotted owl

1988-1991 **Perkins Coie, Seattle, WA and Portland, OR**
Attorney in environmental department of both the Seattle and Portland offices

1987-1988 **U.S. Court of Appeals, Ninth Circuit**
Judge Procter Hug, Jr.
Judicial clerkship

EDUCATION **Stanford Law School**
J.D., June, 1987
Class Secretary and Alumni Correspondent, 1987-1997
Environmental Law Society
Executive vice-president, 1985-1986
Environmental Law Journal

Project editor, 1986
Editorial staff, 1986-1987 Journal

University of Washington
B.A., Political Science, Mar. 1984
Honors: Summa Cum Laude
Phi Beta Kappa
Phi Sigma Alpha (Political Science Honor Society)
U of W Certificate of High Scholarship
Alpha Chi Omega Outstanding Scholarship Award

COMMUNITY PROFESSIONAL SERVICE

Western Environmental Law Center
Secretary/Treasurer, Board member, 1993-2005; Advisory Board, 2006-present
Non-profit organization formed to bring citizens' environmental enforcement litigation throughout the West.

Center for Environmental Law and Policy
Climate and Water Advisory Board, 2008-present
Non-profit organization formed to protect and restore the freshwater resources of Western Washington and the Columbia River Watershed.

Climate Legacy Initiative & Climate Legacy Network
Consultant, 2007-2009
Initiative formed to research and promote legal doctrines, principles, and rules appropriate for recognition by courts, legislatures, administrative agencies, and private sector institutions to safeguard present and future generations from harms resulting from global climate change; http://www.vermontlaw.edu/cli/index.cfm?doc_id=1403.

U.S. District Court Historical Society Board of Trustees
Appointed member, 1999-present.

Tribal Water Advocacy Project
Advisory Board, 2003-2007
Non-profit organization exploring Pacific Northwest water issues affecting tribes.

The First Oregonians Advisory Board
Member, 2002-2003
Advisory Board providing advice and editorial assistance for publication of THE FIRST OREGONIANS 2nd ed.

Clinton Forest Plan Province Advisory Committee,
Southwest Washington Province
Appointed member, 1995-1998
Citizens advisory committee formed under federal regulatory procedures to implement the Clinton Forest Plan for the Southwest Washington Province; members appointed by Chief of the Forest Service.

Cascadia Times
Member, Board of Advisors, 1995-2000
Regional newspaper that provides in-depth investigative reporting on environmental issues throughout the Columbia River Basin, Alaska, and Northern California.

Oregon Trout
Board member and member of Resource Council, 1994-1996.
Non-profit organization dedicated to fish conservation in Oregon.

Oregon Water Resources Institute
Board member, 1994-1996
Institute providing grant funding for research related to water resources.

Western Lands Project, Natural Resources Law Center
Member, Advisory Board, 1995
Group convened by the University of Colorado Natural Resources Law Center to provide advice on project exploring sustainable management of western public lands.

Washington State Boundary Review Board for Clark County
Appointed Board member, 1991-1993; Chair, 1992-1993
Five-member quasi-judicial board created pursuant to Washington state law. Reviewed annexations, special service district boundary changes and sewer/water extensions. Conducted public hearings in accordance with the Washington Administrative Procedures Act and rendered decisions reviewable in Superior Court.

PUBLICATIONS

Books, Law Reviews, and Other Scholarship

NATURAL RESOURCES LAW 2nd Edition (with Jan Laitos, Sandi Zellmer and Dan Cole) (West Publishing, forthcoming May, 2012).

NATURE'S TRUST: ENVIRONMENTAL LAW FOR A NEW ECOLOGICAL AGE (Cambridge University Press, forthcoming Fall 2012).

Treatise on Public Trust Law (work in progress with Professor Michael Blumm).

"Atmospheric Trust Litigation Around the World," chapter in FIDUCIARY DUTY AND THE ATMOSPHERIC TRUST (Ken Coghill, Charles Sampford, Tim Smith, eds) (Ashgate Publishing, Australia, January 2012).

"Atmospheric Trust Litigation," in CLIMATE CHANGE READER (W.H. Rodgers, Jr. and M. Robinson-Dorn, eds.) (Carolina Academic Press, 2011).

"Legal Actions to Secure Life Sources for Future Generations," chapter in THREATENED ISLAND NATIONS: LEGAL IMPLICATIONS OF RISING SEAS AND A CHANGING CLIMATE (with Stephen Leonard, Nicola Peart, Daniel Bartz) (forthcoming, Cambridge University Press, fall, 2012)

"The Dawn of Planetary Patriotism: A Citizens' Call to Climate Defense," co-authored with Heather A. Brinton (work in progress).

"'You Can't Negotiate With a Beetle': Environmental Law for a New Ecological Age," Natural Resources Journal, Vol. 50, No. 1 (Spring 2010).

"Promoting the Urban Homestead: Reform of Local Land Use Laws To Allow Microlivestock on Residential Lots," (with Katy Polluconi, Jeremy Pyle and Naomi Rowden) Ecology Law Currents, Volume 37, http://elq.typepad.com/currents/volume-37-2010/ (2010).

"Reform of Local Land Use Laws to Allow Microlivestock on Urban Homesteads," (white paper produced with the Sustainable Land Use Project) submitted to Eugene Climate Action and Energy Project, City of Eugene (March 1, 2010). In the City of Eugene's Food Security Plan available here http://www.eugene-or.gov/portal/server.pt/gateway/PTARGS_0_2_358372_0_0_18/Food%20Security%20Resource%20and%20Scoping%20%20Plan.pdf (May 2010).

"Cambio Climático Y Justicia: Exijamos Su Responsabilidad A Los Gobiernos," 78 Athanor 27 (edited and translated by Francesc Prims and John Mellgren), www.athanor.es (November-December 2009).

Proposed Draft Executive Order on Climate Change (September 2009).

"Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part I): Ecological Realism and the Need for a Paradigm Shift," 39:1 Environmental Law 43 (March 2009).

"Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations (Part II): Instilling a Fiduciary Obligation in Governance," 39:1 Environmental Law 91 (March 2009).

Atmospheric Trust Litigation, chapter in ADJUDICATING CLIMATE CHANGE: SUB-NATIONAL, NATIONAL, AND SUPRA-NATIONAL APPROACHES (William C.G. Burns & Hari M. Osofsky, eds.) (Cambridge University Press, 2009).

"Regulating Discharges Into Groundwater: The Crucial Link in Pollution Control Under the Clean Water Act," republished in Agricultural Law Bibliography (Drew L. Kershen, ed.) (April 2009) available at http://nationalaglawcenter.org/bibliography/results/?id=24&page=9 (originally published in Harvard Environmental Law Review, 1988).

"Law and Climate Change: Government's Atmospheric Trust Responsibility," excerpt reprinted in CLIMATE CHANGE LAW: MITIGATION AND ADAPTATION (David R. Hodas, Richard Hildreth, and Gustov Speth, eds.) (Spring 2009, West Publishing) (originally published in the Environmental Law Reporter, September 2008).

"Nature's Trust: A Legal, Political and Moral Frame for Global Warming," reprinted in SOCIAL PROBLEMS (Anna Leon-Guerrero and Kristine Zentgraf, eds.) (January 2009, Sage Publications, Inc.) (originally published in the Boston College Environmental Affairs Law Review, May 2007).

"American Indian Law and Forestry," Encyclopedia of U.S. Indian Policy and Law, Paul Finkleman, ed., CQ Press (2009).

"Law and Climate Change: Government's Atmospheric Trust Responsibility," 10 Environmental Law Reporter (September 2008).

"Advancing the Sovereign Trust of Government to Safeguard the Environment for Present and Future Generations," Climate Legacy Initiative Project, http://www.vermontlaw.edu/cli/index.cfm?doc_id=1403 (white paper) (May 2008).

"A Framework of China-U.S. Partnership to Address Global Warming," 3 China Environmental and Resource Law Review, Ocean University (Renmin Press, Spring 2008).

"Nature's Trust: Reclaiming an Environmental Discourse," 2 Stratigraphy and Sedimentology of Oil-Gas Basins, Geology Institute of Azerbaijan National Academy of Sciences, Azerbaijan, Russia (Spring 2008).

"Government's Atmospheric Trust Responsibility," Ecotone, Environmental Studies Program, University of Oregon (Spring 2008).

"Tribes as Trustees Again (Part I): The Emerging Tribal Role in the Conservation Trust Movement," 32 Harvard Environmental Law Review 373 (with Zach Welker) (Spring 2008); republished in The Sovereignty Symposium 2008 conference proceedings, http://www.oscn net/sovereignty/default.aspx.

"Tribes as Trustees Again (Part II): Evaluating Four Models of Tribal Participation in the Conservation Trust Movement," 27 Stan. Envtl. L.J. 477 (with Matt O'Brien) (2008); republished in The Sovereignty Symposium 2008 conference proceedings, http://www.oscn.net/sovereignty/default.aspx.

"Government's Atmospheric Trust Responsibility," 2008 California Environmental Law Reporter 1 (February 2008).

"Nature's Trust as a Paradigm for Scientific Input in Policy Decisions," Abstract, Annual Conference of the American Geophysical Union, San Francisco, California (December 2007) (with Alison Burchell, Ed Whitelaw, Bob Doppelt), available at http://www.agu.org/cgi-bin/SFgate/SFgate.

"Government's Atmospheric Trust Responsibility," 22 Journal of Environmental Law and Litigation 369 (2007).

The Presidential Climate Action Project, Chapter 9, "Natural Resources Stewardship" (contributing author) http://www.climateactionproject.com (September 2007); "Nature's Trust: A Paradigm for Natural Resources Stewardship" (white paper) (December 2007).

"Nature's Trust: Reclaiming an Environmental Discourse," Chapter in POLLUTION: POLICIES AND PERSPECTIVES (Institute of Chartered Financial Analysts of India University Press (ICFAI Press), Hyderbad, India, Fall 2007) (originally published by the Virginia Environmental Law Journal, 2007).

"Nature's Trust: A Legal, Political and Moral Frame for Global Warming," 34:3 Boston College Environmental Affairs Law Review (May 2007).

"Nature's Trust: Reclaiming an Environmental Discourse," 25:2 Virginia L. J. (May 2007).

"EPA's Protection of Tribal Harvests: Braiding the Agency's Mission," 34:1 Ecology Law Quarterly (April 2007).

TEACHER'S MANUAL, NATURAL RESOURCES LAW (with Jan Laitos, Sandi Zellmer and Dan Cole) (West Publishing, January 2007).

"Salmon for Sale: Tribes, Treaties, and Fishing Rights," Oregon's Future 34 (Winter 2006).

NATURAL RESOURCES LAW (with Jan Laitos, Sandi Zellmer and Dan Cole) (West Publishing, 2006).

"Restoring the Abundant Trust: Tribal Litigation in Pacific Northwest Salmon Recovery," 36 Environmental Law Reporter, 10163 (2006).

"Indian Forest Laws," Chapter in HANDBOOK OF FEDERAL INDIAN LAW (Lexis/Nexis Publishing 2005).

"The Politics of Abundance: Towards a Future of Tribal-State Relations," 83 Oregon Law Review 1352 (2004).

"Protecting the Wildlife Trust: A Reinterpretation of Section 7 of the Endangered Species Act," 34 Environmental Law 605 (2004).

"The Indian Trust Responsibility: Protecting Tribal Lands and Resources Though Claims of Injunctive Relief Against Federal Agencies," 39 Tulsa Law Review 355 (2004).

"Rennard's Deanship: The Triumph of Axiology," 80 Oregon Law Review 1155 (2001).

"The Tribal Property Right to Wildlife Capital (Part II): Asserting a Sovereign Servitude to Protect Habitat of Imperiled Species," 25 Vermont Law Review 355 (2001).

"The Tribal Property Right to Wildlife Capital (Part I): Applying Principles of Sovereignty to Protect Imperiled Wildlife Populations," 37 Idaho Law Review 1 (2000).

"Judicial Termination of Treaty Water Rights: The Snake River Case," 36 Idaho Law Review 449 (2000) (co-authored with Michael Blumm, Dale Goble, Judith Royster).

"Native Environmental Sovereignty," Open Spaces Magazine (1999).

"Reclaiming the Natural Rivers: The Endangered Species Act Applied to Endangered River Ecosystems," 40 Arizona Law Review 198-286 (1998).

"Environmental Scholarship for a New Millennium," 26 Environmental Law 761-769 (1996).

"Treaty Rights and the Trust Responsibility," Materials for U.S. Fish and Wildlife Service Training Seminars (1996).

"Tribal Management of Off-Reservation Living Resources: Regaining the Sovereign Prerogative," THE WAY FORWARD: COLLABORATION 'IN COUNTRY' (1995).

"Protecting the Attributes of Native Sovereignty: A New Trust Paradigm for Federal Actions Affecting Tribal Lands and Resources," Utah Law Review 109-237 (1995).

"Fulfilling the Executive's Trust Responsibility Toward the Native Nations on Environmental Issues: A Partial Critique of the Clinton Administration's Promises and Performance," 25 Environmental Law 733-800 (1995).

"Indian Land and the Promise of Native Sovereignty: The Trust Doctrine Revisited," Utah Law Review 1471-1569 (1994).

"Environmental Considerations in Estate Planning and Administration," Oregon Environmental & Natural Resources Law News, Vol. VII, no. 1 (co-authored) (May 1992).

"Status of Heirs and Trustees under CERCLA," Oregon State Bar Environmental and Cultural Resources Section (co-authored) (1992).

"Court Finds New Basis of Liability," The National Law Journal, Vol. 13, no. 36 (co-authored) (1991).

"The Toxic Substances Control Act," OREGON ENVIRONMENTAL LAW DESK BOOK (chapter co-authored with Professor Craig Johnston) (1990).

"Regulating Discharges Into Groundwater: The Crucial Link in Pollution Control Under the Clean Water Act," 12 Harvard Environmental Law Review 569-626 (1988).

OTHER PUBLICATIONS

"How to Sue for Climate Change: The Public Trust Doctrine," co-authored with Susan O'Toole, OUTLOOK: Oregon State Bar Environmental and Natural Resources Section Newsletter Vol. 10 No. 2 (Winter 2009).

"Enforcing the Atmospheric Trust Fiduciary Obligation," co-authored with Susan O'Toole, OUTLOOK: Oregon State Bar Environmental and Natural Resources Section Newsletter Vol. 10 No. 2 (Winter 2009).

"Why U.S. President Must Immediately Regulate Carbon Dioxide Under the Clean Air Act," Opinion Editorial with Tim Ream, China Environmental Law Review, Volume 3 (July 2009).

Comments on Nature's Trust Approach submitted to Office of Management and Budget, Federal Regulatory Review, Office of Information and Regulatory Affairs Request for Comments, 74 Fed. Reg. 8819 (February 26, 2009).

"Obama must act now on climate issue," Opinion Editorial with Tim Ream, The Register Guard (January 27, 2009), http://www registerguard.com/csp/cms/sites/web/news/sevendays/5875322-35/story.csp.

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"C.E.S. Wood Documentary Premiere—Remarks," Address, Premiere of the PBS documentary, "C.E.S. Wood" (February 7, 2008), Oregon Historical Society, available at: http://ohs.org/education/focus/ces-wood-film-premiere.cfm.

"Government's Atmospheric Trust Responsibility," Feature of the Week, Presidential Climate Action Project, www.climateactionproject.com (re-publication of a keynote address given at the 2007 J.E.L.L. Climate Change Conference) (December 4, 2007).

"Team Up to Tackle Climate Change," Oregon Daily Emerald (November 2, 2007), available at: http://media.www.dailyemerald.com/media/storage/paper859/news/2007/11/02/Opinion/Team-Up.To.Tackle.Climate.Change-3075332.shtml.

"Regaining Nature's Trust," *¡Viva! Mercy Magazine,* Institute of the Sisters of Mercy of the Americas, Silver Spring, MD, http://www.sistersofmercy.org/index.php?option=com_content&task=view&id=950&Itemid=180&lang=en (September/October Edition, 2007).

"Nature's Mandate, Our Obligation," 33: 3 *Down to Earth* 9 *(*Montana Environmental Information Center, September 2007), available at: http://www.meic.org/files/energy/global-warming/NaturesTrust.pdf .

"Nature's Mandate, Our Obligation," Climate Crisis Coalition Newsfeed, http://www.climatecrisiscoalition.org/blog/?m=20070807 (re-publication of a speech given at the 2007 Southwest Renewable Energy Conference) (August 12, 2007).

"Rachel's News # 907: "Discretion or Obligation," available at http://www rachel.org/bulletin/index.cfm?St=4, Montague, Peter and Tim Montague, eds., (May 2007).

"Government and Climate Crisis: Discretion or Obligation?" Eugene Weekly online (May 4, 2007), available at: http://www.eugeneweekly.com/2007/05/10/news1 html.

"Oregon State Legislature's Responsibility to Address Global Warming," Legislative Briefing Packet for Oregon Senate Judiciary Committee, University of Oregon School of Law, Eugene, OR (February 16, 2007).

"Now is Time to Stem Global Warming," Opinion Editorial, Vancouver Columbian (Feb. 9, 2007).

"Demand Global Warming Legislation," Opinion Editorial, Idaho Statesman (Jan. 21, 2007).

"A UN Warning Americans Should Not Ignore," Opinion Editorial, Long Valley Advocate (Feb. 7, 2007).

"Bureaucrats Violate Trust By Ignoring Preservation," Opinion Editorial, The Register-Guard (Jan. 12, 2007).

"Trust in Property Rights to Stem Global Warming," Opinion Editorial, The Star News (Dec. 21, 2006).

"Trophy Home Proposal Dishonors the Nez Perce," The Seattle Times, B9 (Feb. 11, 2004).

"American Indians Feel Sting of Insensitivity," The Eastern Oregonian, 6A (Feb. 15, 2004).

"Wallowa Development Dishonors the Nez Perce," Baker City Herald, 4 (Feb. 10, 2004).

"Proposed Development Would Be 'An Unthinkable Desecration,'" Wallowa County Chieftain, 6 (Feb. 12, 2004).

"Proposed Development Would Be 'An Unthinkable Desecration,'" La Grande Observer (Feb. 12, 2004).

"An Unthinkable Desecration," Ta'c Tito'oquan News, 16 (Feb. 2004).

"No Way To Honor Grave Legacy Of Old Joseph," Lewiston Morning Tribune, 6A (Feb. 11, 2004).

"Wallowa County Considers Unthinkable Desecration of A Sacred Site," The Oregonian, D11 (Feb. 11, 2004).

"Nez Perce Fight An Old Battle Again," The Register-Guard, A11 (Feb. 12, 2004).

"Subdivision Would Add Insult To Tribe's Injury," Spokesman Review (Feb. 11, 2004).

"Reaction to P&Z Threatens the Process," The Star-News (Feb. 25, 1999).

"Valley County P&Z Process Jeopardized by Critics of WestRock Decision," The Long Valley Advocate (Feb. 17, 1999).

"Reclaiming Native Environmental Sovereignty in the Columbia River Basin," 20th Annual Report, Columbia River Inter-Tribal Fish Commission (Aug. 1998).

"Salvage Logging Bill Threatens U.S. Forests," The San Diego Union-Tribune (May 3, 1995) (with Chad Hanson).

"Salvage Logging Bill Seen as Rape--or the Salvation--of Forests," The Oregonian (May 1, 1995) (with Chad Hanson).

"The Gorton-Hatfield Forest Giveaway," The New York Times, Sunday Edition (Apr. 30, 1995) (with Chad Hanson).

"Gorton, Hatfield Pull a Fast One to Benefit Timber Industry," Seattle Post-Intelligencer (Apr. 28, 1995) (with Chad Hanson).

"Bill a Blow to Ecosystems, Democracy," The Eugene Register-Guard (Apr. 25, 1995) (with Chad Hanson).

"Tribal Treaty Victory Helps Save Salmon," The Seattle Times (Sept. 30, 1994).

"It's Electricity Turbines that Kill Northwest Salmon, Not Tribal Fishing," Indian Country Today (Sept. 28, 1994).

"Indian Treaty Rights, Salmon, Do Not Pose Conflict," The Columbian (Sept. 27, 1994).

"Indian Rights Face-Off Avoided," The Eugene Register-Guard (Sept. 18, 1994).

"State Over Its Head as Spill Decision-Maker," The Oregonian (July 15, 1994).

Brief submitted on behalf of the U.S. Fish and Wildlife Service in the Endangered Species Act "God Squad" Proceedings involving the Northern Spotted Owl (250p) (co-counsel with Patrick A. Parenteau and Ron Swan) (Feb. 1992).

STANFORD LAWYER, semi-annual column from 1987 to 1998.

DOCUMENTARIES

"Trust," Witness Organization Documentary Series on Atmospheric Trust Litigation (due out 2012).

"Liberty & Wilderness William O. Douglas Film Project," John Concillo, 2011.

PBS documentary, "C.E.S. Wood" (2008), available at: http://ohs.org/education/focus/ces-wood-film-premiere.cfm.

SPEECHES AND APPEARANCES (selected)

"Climate Accountability Workshop," La Jolla, CA (forthcoming June, 14-15, 2012).

"Protecting Tribal Sovereignty: Federal Environmental Regulation in Indian Country," Thirty-Six Annual National Indian Symposium, Warm Springs, OR (forthcoming May 14th, 2012).

"Environmental Politics Leaderships Discussion," Pi Sigma Alpha National Honor Society of Political Science, University of Oregon (forthcoming April 19th 2012).

Guest lecture, Climate Policy Class , University of Vermont (forthcoming April 12th 2012).

"Taking the Long View When Allocating Water Resources," Panel, 2012 PIELC Conference, University of Oregon School of Law, Eugene, Oregon (March 2, 2012).

"Public Trust and Atmospheric Trust Litigation," Panel, 2012 PIELC Conference, University of Oregon School of Law, Eugene, Oregon (March 3, 2012).

"New Directions in Environmental Law: [Re]Claiming Accountability," Yale Law School, New Haven, Connecticut (February 24-25).

"The Politics of Climate Change," Address, Environmental Politics, Lane Community College, Eugene, Oregon (Feb. 15, 2012).

"Victory Speeches for Climate Crisis," Montana Powershift, Missoula, Montana, (February 18, 2012) (video appearance).

"Green Living-Getting Children Involved," Good Earth Home and Garden Show, Lane County Fairgrounds, Eugene, OR (January 21, 2012).

"Environmental Policy and Law," Address, Environmental Politics, Lane Community College, Eugene, Oregon (October 28, 2011).

Invited Participant, The Commons Law Project Workshop, Burlington, Vermont (October 29, 2011) (by video conference).

Guest Lecture, International Environmental Law, Chapman Law School, Orange, California (October 25, 2011) (by video conference).

"Ethical Dilemmas in a New Ecological Age," Oregon Planning Institute, "Planning with Purpose," Eugene, Oregon (September 15, 2011).

"Local Food Production and Regulation," JELL Symposium, "The Local Revolution: How Relationship and Legal Policies are Creating Sustainable Communities Around the Country," Eugene, Oregon (September 9, 2011).

"Climate and the Law," Panel Presentation, AREDAY Summit, "Putting the Green in Green – Monetizing Carbon in the Global Economy," Aspen, Colorado (August 18-21, 2011).

"Tribes and the Federal Trust Relationship: Thoughts about Its Past, Present, and Future," Panel Presentation, Tribes as Sovereign Governments in an Unstable Political Environment, Native Leadership Forum, Temecula, California (June 2-3, 2011) (paper participation due to flight cancellation).

Tour Commentary, Columbia River Gorge Speaking Tour, Natural Resources Law Teachers Institute, Stevenson, Washington (May 25-27, 2011).

"Legal Remedies of Threatened Island Nations and Future Generations," Presentation, Threatened Island Nations: Legal Implications of Rising Seas and a Changing Climate, Columbia Law School, New York, New York (May 23, 2011) (presented by A. Oposa on behalf of co-authors).

Interview with Viv Benton, "The Good Life," Australia Radio, 3WBC, http://www.wwmn net/2011/05/live-the-good-life-with-the-bentons/ (May 12, 2011).

Environment 2050 Interview with David Rejeski, Director, Science and Technology Innovation Program, Woodrow Wilson International Center for Scholars (April 26, 2011).

"Atmospheric Trust Litigation," Video-conference Keynote Address, "Climate Change Law Conference," University of California, Irvine School of Law, Irvine, California (April 1, 2011).

“Nature’s Trust: Environmental Law for the New Ecological Age,” Address, UC Davis Law Review Symposium: The Public Trust Doctrine, Davis, California (March 4, 2011).

“Alternative Agricultures: Urban Farming & Micro-Ranching,” Panel Presentation, “Food Justice, Security, and Sustainability,” Wayne Morse Center for Law and Politics (February 19-21, 2011).

"Nature’s Trust: Environmental Law for the New Ecological Age," Keynote Address, Ideas Matter Series, Oregon State University, Corvallis, Oregon (February 17, 2011).

“Climate Crisis and Citizenship,” Fort Nightly Club, First Congregational Church, Eugene, Oregon (February 17, 2011).

“The Politics of Climate Change,” Address, Environmental Politics, Lane Community College, Eugene, Oregon (February 15, 2011).

“Microlivestock and the Urban Homestead: Bringing Meat and Dairy to the Neighborhood,” Interview, UO Today, Eugene, Oregon, available at http://media.uoregon.edu/channel/2011/03/21/uo-today-470-mary-wood/ (February 8, 2011).

“Green Living – Getting Children Involved,” Address, Green Home Show, Eugene, Oregon (January 22, 2011).

“Local Food Sovereignty,” St. Mary’s Episcopal Church, Eugene, Oregon (November 3, 2010).

Panel Address, Local and Green Community Conference, Eugene, Oregon (October 30, 2010).

“Climate Change and the Role of Victory Congregations,” Video-Conference Keynote Address, “Planet in Crisis: Mercy Response,” Sisters of Mercy Justice Conference, Biddeford Pool, Maine (October 30, 2010).

"The Politics of Climate Change," Address, Environmental Politics, Lane Community College, Eugene, Oregon (October 27, 2010).

Environmental Politics Class, University of Oregon, Eugene, Oregon (October 27, 2010).

Introduction, Speaker Dr. James Hansen, co-sponsored by the ENR Center and Morse Center for Law & Politics, on Climate Ethics and Equity Theme of Inquiry, UO Law School (October 16, 2010).

"The Planet on Your Docket," Atmospheric Trust Litigation Workshop, University of Oregon (October 15, 2010).

“Urban Homesteading and Microlivestock,” Panel Presentation, Cultivating Our Future: New Landscapes in Food and Agricultural Law and Policy, Journal of Environmental Law and Litigation Symposium, University of Oregon School of Law, Eugene, Oregon (October 1, 2010).

Opening Address, Cultivating Our Future: New Landscapes in Food and Agricultural Law and Policy, Journal of Environmental Law and Litigation Symposium, University of Oregon School of Law, Eugene, Oregon (October 1, 2010).

Interview with Janaia Donaldson for “Peak Moment: Locally Reliant Living for Challenging Times,” available at www.peakmoment.tv/conversations (September 23, 2010).

“The Public Trust in Oceans: The Potential Judicial Role,” Ocean Impacts of Climate Change: Science, People and Policy, Wayne Morse Center for Law and Politics Symposium cosponsored by PISCO: Partnership for Interdisciplinary Studies of Coastal Oceans and the UO School of Law, Eugene, Oregon (September 10, 2010).

Interview with Jose Espinosa for “USA Green Stories,” Voice of America (documentary forthcoming 2011) (June 10, 2010).

“Climate Crisis and Citizenship,” Eugene Rotary Club, Eugene, Oregon (June 8, 2010).

“Urban Homesteading for Kids,” 4J School, Eugene, Oregon (June 8, 2010).

Interview with John Concillo for "William O. Douglas: Liberty and Wilderness," Oregon Cultural Heritage Commission (documentary forthcoming 2011) (June 2, 2010).

Official testimony on Microlivestock Ordinance before the Eugene City Council, Eugene, Oregon (May 24, 2010).

"The Politics of Climate Change," Address, Environmental Politics, Lane Community College, Eugene, Oregon (April 30, 2010).

"How the International Law of Badminton Saved Endangered Species Habitat," Address, "Crisis and Collaboration: Environmental Decision Making in a Rapidly Changing Landscape" A Series of Fireside Conversations, Eugene, Oregon (April 21, 2010).

Moderator, "Climate Legislation Forum," Climate Crisis Working Group, Eugene, Oregon (April 7, 2010).

"Climate Change and Food Security," Address, Lane County Food Policy Council, Eugene, Oregon (April 6, 2010).

Panelist, "Intergenerational Equality and Climate Change: Saving the Planet for Future Generations," Wayne Morse Center for Law and Politics Symposium, Eugene, Oregon (March 11, 2010).

"Actions by Individuals, Businesses, NGO's, and Governmental Bodies," Panel Presentation, "Globalization, Economic Justice, and Climate Change," 2010 Trina Grillo Retreat, Eugene, Oregon (March 7, 2010).

"The Public Trust: 1,500 Years Old and Still Kicking," Panel Presentation, "Recover Renew Reimagine," 28th Annual Public Interest Environmental Law Conference, Eugene, Oregon (February 26, 2010).

"Climate Change and Food Security," Panel Presentation, City of Eugene Food Security Town Hall, Eugene, Oregon (February 17, 2010).

"Raising Citizens Not Consumers," Good Earth Home Show, Eugene, Oregon (January 23, 2010).

"Government's Atmospheric Trust Responsibility," Climate Ethics and Law Class, University of Oregon, Eugene, Oregon (November 23, 2009).

"Atmospheric Trust Litigation: A Strategy to Fight Climate Change," Video-Conference Keynote Address, ART Climate Workshop, RMIT University, Melbourne, Australia (November 23, 2009).

"People-powered Politics," Keynote Address, Powershift West Rally, Eugene, Oregon (November 8, 2009).

"Agribusiness and Local Farming: The Effects of Food on Climate Change," Panelist, Powershift West Summit, University of Oregon, Eugene, Oregon (November 7, 2009).

"Political Action, Youth Empowerment," Panelist, Powershift West Summit, University of Oregon, Eugene, Oregon (November 7, 2009).

"Victory Speakers," Journalism Class, University of Oregon, Eugene, Oregon (November 3, 2009).

"350! Artists for Climate Action," Hult Center, Eugene, Oregon (October 24, 2009).

"Climate Policy: What if Politics Fail Us?," Dialogue with James McCarthy and Dale Jamieson, Wayne Morse Center for Law and Politics, University of Oregon School of Law, Eugene, Oregon (October 22, 2009).

"Nature's Trust as a Paradigm Shift in Environmental and Natural Resources Law," Video-conference Address, Georgetown Environmental Workshop (October 8, 2009).

Dialogue Participant, "Community Conversation on the Ethics of Climate Change," Community Philosophy Institutes, University of Oregon Philosophy Department, Eugene, Oregon (October 3, 2009).

"Climate Crisis and Citizenship," Emerald Empire Kiwanis Club, Eugene, Oregon (September 17, 2009).

Panel Moderator, Journal of Environmental Law and Litigation Symposium, University of Oregon School of Law, Eugene, Oregon (September 11, 2009).

"The Environment as a Public Trust: Climate Change & Planetary Solutions for Survival," interview with Sue Supriano, http://www.suesupriano.com/article.php?&id=157 (July 13, 2009); distributed on WINGS (Women's International News Gathering Service), http://www.wings.org/ (July 26, 2009).

"Nature's Trust and Planetary Patriotism," Address, Grade School History Club, University of Oregon, Eugene, Oregon (June 3, 2009).

"Victory Congregations: Voicing the Sacred Trust Covenant in Climate Defense," Address, St. Thomas More Newman Center, Eugene, Oregon (May 19, 2009).

"The Politics of Climate Change," Address, Environmental Politics, Lane Community College, Eugene, Oregon (May 4, 2009).

"Victory Congregations: Voicing the Sacred Trust Covenant in Climate Defense," Earth Sunday Address, First United Methodist Church, Eugene, Oregon (May 3, 2009).

"Environmental Benefits of Local Food Production," Address, Church Women United, First United Methodist Church, Eugene, Oregon (April 3, 2009).

"A Trust Paradigm for a New Presidency," Presentation, Beyond the Discrimination Frame: Effective Strategies for Redress in the 21st Century Symposium, Henderson Center for Social Justice, UC Berkeley School of Law, Berkeley, California (March 13, 2009).

Opening Remarks and Introductions, Climate Crisis Working Group, Harris Hall, Eugene, Oregon (March 11, 2009); Forum aired on Community Television of Lane County, Cable Channel 29 (April 15 & 22, 2009).

"The Politics of Climate Change," interview with Laurie Mercier, KBOO 90.7FM, http://kboo.fm/node/12479 (March 2, 2009).

"The Trust Approach to Environmental Decision Making," Presentation, Public Interest Environmental Law Conference, University of Oregon School of Law, Eugene, Oregon (February 27, 2009).

Interview with Kelly Matheson for "Environment is Life: Voices from Human Rights Activists Around the World", available at http://hub.witness.org/EarthDay2009 (February 26, 2009).

"Perfection v. Survival: A Lawyer's Role in the Age of Global Warming," Address, Environmental and Land Use Section of the Lane County Bar Association, University of Oregon School of Law, Eugene, Oregon (February 25, 2009).

"The Climate Victory Speakers," Address, League of Women Voters, Eugene, Oregon (February 19, 2009).

"A Political Paradigm for the New Administration," Address, Environmental Politics, Lane Community College, Eugene, Oregon (February 17, 2009).

"Bridging Law and Science in the Face of Climate Emergency," Address, "Sustainable Solutions," A Series of Fireside Conversations on Global Warming, University of Oregon, Eugene, OR (February 12, 2009).

"Carbon-Cutting for Your Future," Address, Edgewood Community School, Eugene, Oregon (December 11, 2008).

“Act Locally, Think Globally: How Nature’s Trust Can Seed Relocalization and Pollinate Planetary Patriotism,” Address, Post Carbon Eugene, Eugene, OR (December 10, 2008).

"Tribal History and U.S. History," Address, Grade School History Club, University of Oregon, Eugene, Oregon (December 2, 2008).

“Government's Atmospheric Trust Obligation," Address, Environmental Planners and Policymakers, University of Oregon, Eugene, OR (November 21, 2008).

Public Trust Workshop, Northwest Environmental Defense Center, Westwind Camp, OR (October 11, 2008).

“The Atmosphere and the Public Trust: Atmospheric Trust Litigation,” Keynote Address, Reunion Weekend, University of Oregon School of Law, Eugene, OR (October 10, 2008).

Climate Briefing to Lane County Commissioners, Eugene, OR (September 17, 2008).

“Federal Indian Law and Policy,” Video Seminar for US Department of Agriculture, Washington, DC (August 26, 2008).

“Idaho’s Atmospheric Trust Obligation,” Public Keynote Address, Sponsored by the Green LEEDers, Boise, ID (August 21, 2008).

Interview with Gavin Dahl, Boise Community Radio, 89.9FM, http://radioactivegavin.wordpress.com/2008/08/26/no-time-for-passive-lawmakers/ (August 21, 2008).

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“The Politics of Abundance: Towards a Future of Tribal-State Relations,” Keynote address at Governor’s State-Tribal Summit, Pendleton, Oregon (Oct. 26, 2004).

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"Judicial Review of Politicized Agency Decision-Making: Reforms to the Deference Doctrine," Oregon Chapter of the American Fisheries Society, Eugene, Oregon (Feb. 26, 2003).

2002 J.E.L.L. Symposium Introductory Speaker, University of Oregon School of Law, Eugene, Oregon (Feb. 1, 2002).

"Public Lands and Property Law for Refuge Management," U.S. Fish and Wildlife Service National Employee Training Seminar, Realty 2001 - Resource Protection in the New Millennium, Sunriver, Oregon (Mar. 29, 2001).

"The Changing Face of Public Lands," Keynote address, National Law Enforcement Conference of Assistant U.S. Attorneys, U.S. Department of Justice, Boise, Idaho (Nov. 14, 2000).

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"The Tribal Property Right to Wildlife Capital: Applying Principles of Sovereignty to a Modern Extinction Crisis," NAELS Conference on Oceans & Environmental Law, Stanford Law School speaker series (Mar. 10-12, 2000).

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"Federal Responsibilities Towards Native Nations in Implementing the Endangered Species Act," Presentation to Executive Officers and Staff at National Oceanic and Atmospheric Association, Washington, D.C. (Dec. 3, 1998).

“The Federal Trust Responsibility as Applied to USFWS Programs,” Presentation to U.S. Fish and Wildlife Service Officials, USFWS Training Seminar, Klamath Falls, OR (Sept. 15, 1998).

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"Gifford Pinchot Forest Management: Old Practices Under a New Name," Washington State University, Vancouver, WA (Apr. 24, 1997).

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"Understanding the Legal Framework for Forest Management," University of Oregon Biology Department, Eugene, OR (Nov. 26, 1996).

"The State of the Forest—Gifford Pinchot," Presentation before the Clinton Forest Plan Province Advisory Committee, Vancouver, WA (Nov. 21, 1996).

"Shifting Paradigms in Natural Resources Management for a New Millennium," Presentation at Oregon State University, Corvallis, OR (Nov. 19, 1996).

"Land Use Law and the 21st Century: Practices, Policies, and Paradigms," University of Oregon School of Law Commentator & Moderator (Nov. 17, 1996).

"Private Rights on Public Lands," Federal Association of Communications Specialists, Denver, CO (Oct. 1996).

“The Columbia: What has Happened to our River," Conference sponsored by Center for Columbia River History and Fort Vancouver Regional Library, Commentator & Moderator, Vancouver, WA (Sept. 19, 1996).

“A Comparison: Lessons from the Columbia and the Upper Colorado Fish Recovery Efforts,” Seventeenth Annual Summer Conference, University of Colorado School of Law, Boulder, CO (June 9-12, 1996).

“Environmental Scholarship For a New Millennium,” Dinner Speech, Lewis & Clark Law School Annual Law Review Banquet, Portland, OR (Apr. 1996).

“The Clearcut Logging Rider and Pacific Northwest Forests,” Washington State University Earth Day Keynote Address, Vancouver, WA (Apr. 1996).

"Treaty Rights, Trust Responsibility, and the Role of the U.S. Fish and Wildlife Service," Federal Employee Training Seminar, U.S. Fish and Wildlife Service, Portland, OR (Apr. 1996).

"Responding to the Contract with America and Beyond," 1996 Annual Public Interest Law Conference, University of Oregon, Eugene, OR (Mar. 1996).

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"The Sovereign Underpinnings of Indian Gaming Issues," Presentation to the Governor's Special Task Force on Gaming, Salem, OR (Feb. 1996).

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"Tribal Management of Off-Reservation Living Resources: Arrangements in the United States," National Native Tribunal, Darwin, Australia (Sept. 26, 1995).

"The Indian Trust Doctrine: Background and Application to Environmental Law," Oregon State Bar Continuing Legal Education Presentation, Indian Law Section, Portland, OR (June 22, 1995).

"The Columbia River Salmon Crisis and the Role of Treaty Rights," 1995 Annual Public Interest Law Conference, University of Oregon Law School, Eugene, OR (Mar. 3, 1995).

"The Indian Trust Doctrine and the Clinton Environmental Policy," Annual Conference of the Association of American Law Schools (AALS) Environmental and Natural Resources Section, New Orleans, LA (Jan. 1995).

"Environmental Justice Issues and Tribal Treaty Rights in Endangered Species Act Implementation," Conference on Environmental Justice, University of Oregon School of Law, Eugene, OR (Jan. 1995).

"Species Conservation and the Federal Trust Responsibility Towards Indian Tribes: The Columbia River Basin Salmon Crisis," Symposium on Marine Wildlife, Lewis & Clark School of Law, Portland, OR (Sept. 1994).

"Charge to the Class," University of Oregon School of Law Graduation Ceremonies, Eugene, OR (May 1994).

"Hazardous Waste Disposal on Indian Reservations: The Government's Trust Obligations," 1994 Annual Public Interest Law Conference, University of Oregon, Eugene, OR (Mar. 1994).

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"The Politicization of the Endangered Species Act Exemption Committee Proceedings," University of Oregon School of Law, Eugene, OR (1993).

"The Private Side of CERCLA," 1992 Annual Public Interest Law Conference, University of Oregon, Eugene, OR (Mar. 1992).

"Addressing Indoor Air Pollution Through Real Estate Transactions," Washington State Bar Real Estate Section, Blaine, WA (1990).

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"Wildlife Law, Policy, and Administration," Portland State University Public Policy Department (1998).

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"The Northwest Power Planning Act: An Overview," Training Workshop for Citizens, Eugene, OR (Oct. 31, 1994).

"Enforcement Issues under the Clean Air Act Amendments of 1990," Clean Air Act Amendments Seminar (sponsored by OMNI Environmental Services), Portland, OR (1991).

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"Overview of Clean Water Act Stormwater Regulations," Annual Western Oregon Regional Wastewater Short School (sponsored by Pacific Northwest Pollution Control Association), Portland, OR (1991).

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From: **Mary Wood** mwood@uoregon.edu
Subject: Re: Workshop Report on Establishing Accountability for Climate Change Damages
Date: October 17, 2012 at 5:39 PM
To: Peter Frumhoff [redacted]

Wonderful - thanks. UCS does such amazing things. Yesterday I had another moment of deep gratitude for your work. I was searching down a tricky document for the final edits of my book, Nature's Trust, and where do you imagine I found it? As an appendix to the Smoke and Mirrors Report. I've told Jim McCarthy this too, multiple times - UCS produces wonderful analysis that I use in my own work. Thank you. Mims

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On Oct 16, 2012, at 7:54 AM, Peter Frumhoff wrote:

> Dear Colleagues,
>
> On behalf of my fellow workshop organizers, I am very pleased to share with you the attached final report of our June Climate Accountability workshop discussions. Thanks to Seth Shulman for drafting this report, to UCS communications staff for report production and to many of you for careful review and feedback on earlier drafts.
>
> As you know, our primary audience is all of you and other colleagues in our community – scholars, practitioners and funders - who were not able to attend. We will not be posting this report on the web, or otherwise releasing it publicly, and ask that you share the report with key colleagues with these limited distribution goals in mind. These goals notwithstanding, there's always the prospect of broader than intended circulation and readership. In consultation with several of you, we've strived to take that prospect in account in editing.
>
> Again, many thanks for co-creating this with us. Our workshop has already directly informed and energized new directions for climate work at UCS. I hope that it is equally useful to you. And I'm confident that many others who read this report with care will similarly draw upon it as a core resource for stronger, smarter climate action for some time to come.
>
> All best regards,
>
> Peter
>
> Peter C. Frumhoff, Ph.D
> Director of Science and Policy
> Chief Scientist, Climate Campaign
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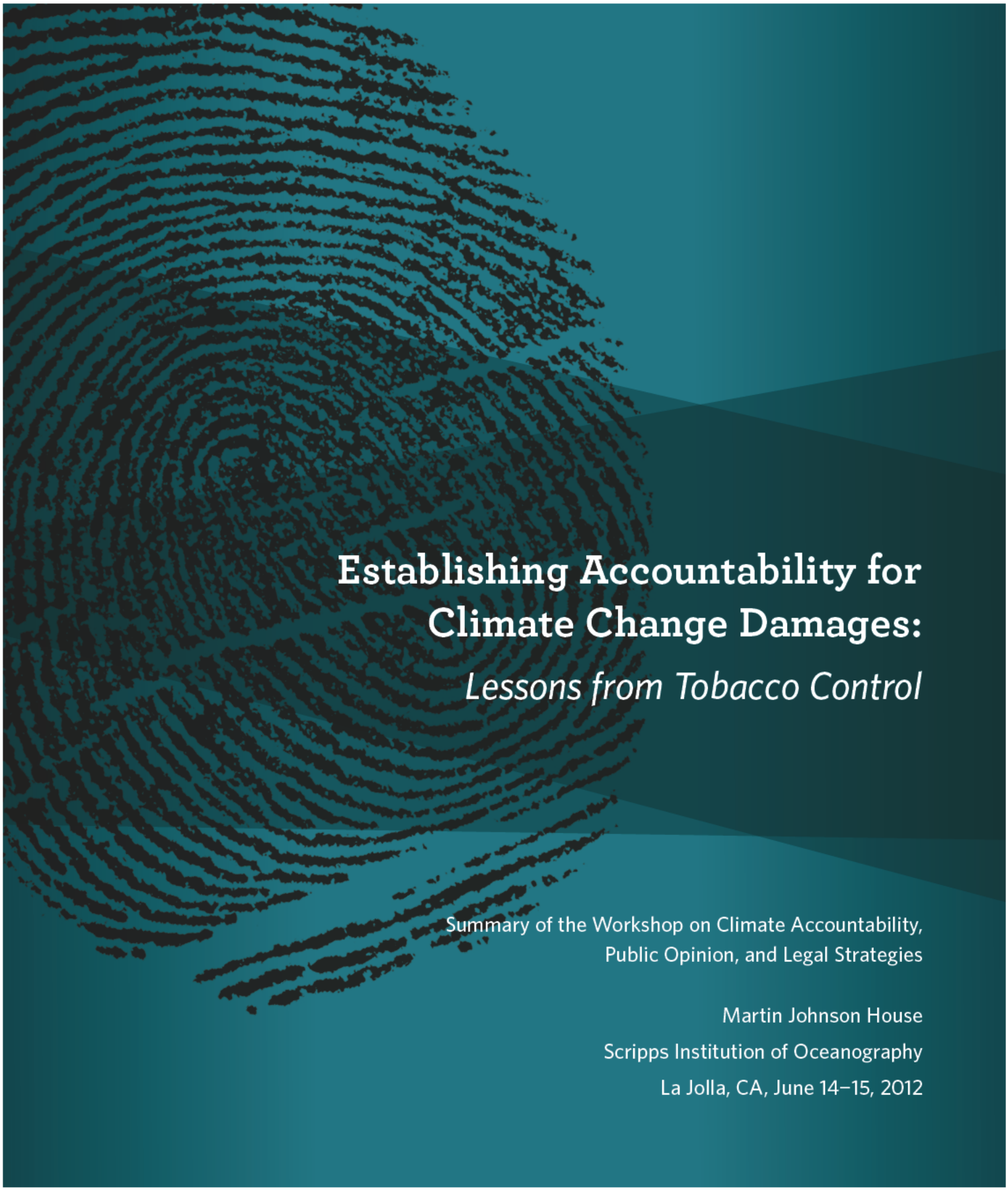

Establishing Accountability for Climate Change Damages:

Lessons from Tobacco Control

Summary of the Workshop on Climate Accountability, Public Opinion, and Legal Strategies

Martin Johnson House

Scripps Institution of Oceanography

La Jolla, CA, June 14–15, 2012

CLIMATE ACCOUNTABILITY INSTITUTE

Union of Concerned Scientists

Report Author
This workshop summary was written by Seth Shulman, senior staff writer at the Union of Concerned Scientists.

Workshop Organizers
The workshop was conceived by Naomi Oreskes of the University of California–San Diego, Peter C. Frumhoff and Angela Ledford Anderson of the Union of Concerned Scientists, Richard Heede of the Climate Accountability Institute, and Lewis M. Branscomb of the John F. Kennedy School of Government at Harvard University and the Scripps Institution of Oceanography. Alison Kruger of the Union of Concerned Scientists coordinated workshop logistics.

Organizational affiliations are for identification purposes only. The opinions expressed in this report are the sole responsibility of the participants quoted.

Acknowledgments
This workshop was made possible by the V. Kann Rasmussen Foundation, the Mertz Gilmore Foundation, The Grantham Foundation for the Protection of the Environment, and the Martin Johnson House at the Scripps Institution of Oceanography. Without their generous support, this workshop would not have been possible.

The Union of Concerned Scientists is the leading science-based nonprofit working for a healthy environment and a safer world. More information about UCS is available on the UCS website at *www.ucsusa.org*.

The Climate Accountability Institute engages in research and education on anthropogenic climate change, dangerous interference with the climate system, and the contribution of fossil fuel producers' carbon production to atmospheric carbon dioxide content. This encompasses the science of climate change, the civil and human rights associated with a stable climate regime not threatened by climate-destabilizing emissions of greenhouse gases, and the risks, liabilities, and disclosure requirements regarding past and future emissions of greenhouse gases attributable to primary carbon producers.

Contents

Appendices

Preface

The workshop sought to compare the evolution of public attitudes and legal strategies related to tobacco control with those related to anthropogenic climate change.

For many years after scientists first concluded that smoking causes cancer, the tobacco companies continued to win court cases by arguing, among other things, that smokers assumed the risk of smoking and that no specific cancer deaths could be attributed to smoking. At some point, however, the tobacco companies began to lose legal cases against them even though the science had not substantively changed. Juries began to find the industry liable because tobacco companies had known their products were harmful while they publicly denied the evidence, targeted youth, and manipulated nicotine levels.

To explore how this transformation happened, and to assess its implications for people working to address climate change, the Union of Concerned Scientists and the Climate Accountability Institute brought together about two dozen leading scientists, lawyers and legal scholars, historians, social scientists, and public opinion experts for a June 14–15, 2012, workshop at the Scripps Institution of Oceanography in La Jolla, CA.

Specifically, the workshop sought to compare the evolution of public attitudes and legal strategies related to tobacco control with those related to anthropogenic climate change, fostering an exploratory, open-ended dialogue about whether we might use the lessons from tobacco-related education, laws, and litigation to address climate change. The workshop explored which changes now being observed (e.g., increasing extreme heat, sea level rise) can be most compellingly attributed to human-caused climate change, both scientifically and in the public mind. Participants also considered options for communicating this scientific attribution of climate impacts in ways that would maximize public understanding and produce the most effective mitigation and adaptation strategies.

The workshop explored the degree to which the prospects for climate mitigation might improve with public acceptance (including judges and juries) of the causal relationships between fossil fuel production, carbon emissions, and climate change. Participants

debated the viability of diverse strategies, including the legal merits of targeting carbon producers (as opposed to carbon emitters) for U.S.-focused climate mitigation. And finally, the group sought to identify the most promising and mutually reinforcing intellectual, legal, and/or public strategies for moving forward. We are pleased to share the outcome of these preliminary workshop discussions. Among the many points captured in this report, we want to highlight the following:

- A key breakthrough in the public and legal case for tobacco control came when internal documents came to light showing the tobacco industry had knowingly misled the public. Similar documents may well exist in the vaults of the fossil fuel industry and their trade associations and front groups, and there are many possible approaches to unearthing them.
- Drawing upon the forthcoming "carbon majors" analysis by Richard Heede, it may be feasible and highly valuable to publicly attribute important changes in climate, such as sea level rise, to specific carbon producers. Public health advocates were effective in attributing the health impacts of smoking to major tobacco companies.
- While we currently lack a compelling public narrative about climate change in the United States, we may be close to coalescing around one. Furthermore, climate

Climate change may loom larger today in the public mind than tobacco did when public health advocates began winning policy victories.

change may loom larger today in the public mind than tobacco did when public health advocates began winning policy victories. Progress toward a stronger public narrative might be aided by use of a "dialogic approach" in which climate advocates work in partnership with the public. Such a narrative must be both scientifically robust and emotionally resonant to cut through the fossil fuel industry's successful efforts to sow uncertainty and confusion.

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Climate Accountability, Public Opinion, and Legal Strategies Workshop

Martin Johnson House, Scripps Institution of Oceanography, La Jolla, CA, June 14–15, 2012

1. Introduction

Tobacco companies realized they did not need to prove their products were safe. Rather, they had only to implement a calculated strategy to foster doubt about the science.

For decades after U.S. tobacco firms first became aware of strong scientific evidence linking smoking to cancer in the mid-1950s, the industry adopted a public relations strategy that knowingly sought to confuse people about the safety of its products. As we now know, tobacco industry lawyers long advised their clients that if they admitted to selling a hazardous product they would be vulnerable to potentially crippling liability claims. So, despite the scientific evidence, the industry developed and implemented a sophisticated disinformation campaign designed to deceive the public about the hazards of smoking and forestall governmental controls on tobacco consumption.

As time went on, a scientific consensus emerged about a multitude of serious dangers from smoking. On January 11, 1964, for instance, the U.S. government released the first report by the Surgeon General's Advisory Committee on Smoking and Health, which specifically warned the public about the link between smoking and lung cancer.[1] Nonetheless, the tobacco industry's disinformation campaign continued. As internal documents have long since revealed, the tobacco companies quickly realized they did not need to prove their products were safe. Rather, they had only to implement a calculated strategy to foster doubt about the science in the minds of the public. As one infamous internal memo from the Brown & Williamson company put it: "Doubt is our product, since it is the best means of competing with the 'body of fact' that exists in the minds of the general public."[2] The industry also managed to convince juries that smoking was a voluntary act, that the public was well informed of "potential risks," and that smokers therefore only had themselves to blame for whatever harm may have occurred.

It has become increasingly clear during the past decade or more that the fossil fuel industry has adopted much the same strategy:

attempting to manufacture uncertainty about global warming even in the face of overwhelming scientific evidence that it is accelerating at an alarming rate and poses a myriad of public health and environmental dangers. Not only has the fossil fuel industry taken a page from the tobacco industry's playbook in its efforts to defeat action on climate change, it also shares with the tobacco industry a number of key players and a remarkably similar network of public relations firms and nonprofit "front groups" that have been actively sowing disinformation about global warming for years.[3]

At this pivotal moment for climate change, with international agreement all but stymied and governmental action in the United States largely stalled, the Union of Concerned Scientists and the Climate Accountability Institute sought to build a clearer understanding of the drivers of change that eventually proved effective against the tobacco industry. To be sure, lawyers played a huge role; scientific evidence played an important role as well. But notably, neither science nor legal strategies alone drove the changes in public understanding of the health dangers posed by smoking. Workshop participants were therefore asked to share their perspectives on a key question: given the power and resources of the tobacco industry, how *were* tobacco control efforts able to finally gain traction?

By gathering a distinguished and complementary group of experts, the Climate Accountability Workshop created the conditions for a well-informed discussion about the history of tobacco prevention as an example for those working on climate change: exploring how science in combination with the law, public advocacy, and possibly new technology can spur a seminal shift in public understanding and engagement on an issue of vital importance to the global community.

What follows is a summary of the workshop designed to highlight some of the major themes that emerged over the course of two days of structured dialogue. Because the discussion was often animated and wide-ranging, this report does not attempt to portray a comprehensive account of all the ideas presented, but rather the key findings that emerged.

When I talk to my students I always say, tobacco causes lung cancer, esophageal cancer, mouth cancer. . . . My question is: What is the "cancer" of climate change that we need to focus on?

—Naomi Oreskes

2. Lessons from Tobacco Control: Legal and Public Strategies

Both the tobacco industry and the fossil fuel industry have adopted a strategy of disseminating disinformation to manufacture uncertainty and forestall government action, and in so doing, have placed corporate interests above the public interest.

Workshop participants reviewed the history of tobacco control in the United States to identify lessons that might be applicable to action on global warming. The first important insight was that the history of tobacco control efforts stretches back much further than most people realize. The American Tobacco Company was broken up as a result of the Sherman Anti-Trust Act of 1890, and several U.S. states banned tobacco entirely between 1890 and 1920 in response to concerns that the powerful tobacco industry was paying off legislators. Those bans were all overturned after successful lobbying efforts by the industry, but a landmark 1900 legal case (*Austin v. Tennessee*) set an important precedent by upholding the legal right of states to ban tobacco.[4]

A second important insight was that the battle for tobacco control continues today, despite substantial gains over the past several decades. In a point made forcefully by Robert Proctor, a science historian who frequently serves as an expert witness in tobacco litigation, "Tobacco is not over." While the number of cigarettes smoked worldwide may no longer be growing, an estimated 6 trillion were still sold and smoked in 2012. More than 45 million Americans continue to smoke, some 8 million live with a serious illness caused by their smoking, and more than 400,000 die prematurely each year.[5]

A few principles emerged from the long fight for tobacco control. First, any legal strategies involving court cases require plaintiffs, a venue, and law firms willing to litigate—all of which present significant hurdles to overcome. Robert Proctor generalized about the history of tobacco-related litigation by noting that tobacco opponents typically won with simplicity but lost in the face of complexity. As he noted, it is worth remembering that, "The industry can win by making plaintiffs have to pass a thousand hurdles, any one of which can derail the whole effort." Second, public victories can occur even when the formal point is lost. In one effort that sought to stop tobacco research at Stanford University, for instance, no formal ban was enacted but the public outcry led the Philip Morris company to stop its external research programs anyway.[6]

The Importance of Documents in Tobacco Litigation

One of the most important lessons to emerge from the history of tobacco litigation is the

value of bringing internal industry documents to light. Roberta Walburn, a key litigator in the pathbreaking 1994 case *State of Minnesota and Blue Cross and Blue Shield of Minnesota v. Philip Morris et al. [C1-94-8565]*, explained that her legal team, with strong backing from Minnesota Attorney General Hubert "Skip" Humphrey, made it a goal from the start of the lawsuit to use the process of legal discovery to gain access to Philip Morris's internal documents and make them part of the public domain. Walburn noted that Humphrey was mocked and scorned by many of his colleagues for this emphasis, but it proved critical to achieving the landmark settlement.

For the previous four decades, the tobacco industry had not lost a single legal case nor been forced to release most of its internal documents. But attorneys began to see the tremendous value of the industry's memos in an individual New Jersey smoker's case in the 1980s, and when a paralegal leaked some internal documents in the early 1990s. By making such documents a key part of the Minnesota litigation, the legal discovery process ultimately brought some 35 million pages of industry documents to light.[7]

Of course, the release of so many documents also presented immense challenges, requiring the legal team to pore over them one page at a time. The industry also went to great lengths to hide documents throughout the discovery process, listing them under different corporate entities, "laundering" scientific documents by passing them through attorneys in order to claim attorney-client privilege, and playing word games in order to claim they didn't have any documents on the topics sought by the plaintiffs. During pre-trial discovery in the Minnesota litigation, Walburn noted, Philip Morris was spending some $1.2 million dollars every week in legal defense.

In the end, however, the documents proved crucial in helping to shift the focus of litigation away from a battle of the experts over the science of disease causation and toward an investigation of the industry's conduct. As Roberta Walburn explained, their legal team was able to say to the judge and jury, "You don't have to believe us or our experts; just look at the companies' own words." The strategy of prying documents from the industry also proved effective because once a lawsuit begins, litigants are required by law to retain evidence. The very first order issued by the judge in the Minnesota case was a document preservation order, which meant that the company could be held in contempt of court if it failed to comply. Companies are also required to preserve any documents they think might be pertinent to possible future litigation.

Today, the documents that have emerged from tobacco litigation have been collected in a single searchable, online repository: the so-called Legacy Tobacco Document Library (available at l*egacy.library.ucsf.edu*) currently contains a collection of some 80 million pages. Stanton Glantz, a professor of cardiology at the University of California–San Francisco who directs the project, noted the importance of the decision to create an integrated collection accessible to all. One advantage of such a collection, he said, is that it becomes a magnet for more documents from disparate sources.

Because the Legacy Collection's software and infrastructure is already in place, Glantz suggested it could be a possible home for a parallel collection of documents from the fossil fuel industry pertaining to climate change. He stressed the need to think carefully about which companies and which trade groups might have documents that could be especially useful. And he underscored the point that bringing documents to light must be

established as an objective independent of the litigation, or else the most valuable documents are not likely be made public.

Documents Helped Establish a Conspiracy

The release of documents from the tobacco industry became front-page news in the 1990s. The headlines did not tout the fact that tobacco causes lung cancer, which had already been widely reported; instead, they focused on the tobacco industry's lies to the public, its efforts to target children in its marketing campaigns, and its manipulation of the amount of nicotine in cigarettes to exploit their addictive properties.[8] Many of these facts had not come to the public's attention until the industry's internal documents came to light.

Most importantly, the release of these documents meant that charges of conspiracy or racketeering could become a crucial component of tobacco litigation. Formerly secret documents revealed that the heads of tobacco companies had colluded on a disinformation strategy as early as 1953.[9]

Sharon Eubanks noted the importance of documents in a racketeering case against the tobacco industry she prosecuted during the Clinton administration. That case, *U.S.A v. Philip Morris, Inc.*, was filed after President Clinton directed his attorney general to attempt to recover from the tobacco industry the costs of treating smokers under Medicare. The Justice Department brought the case under the Racketeer Influenced and Corrupt Organizations (RICO) statute that was originally enacted to combat organized crime.

The U.S. District Court for the District of Columbia found Philip Morris and other tobacco companies charged in the case guilty of violating RICO by fraudulently covering up the health risks associated with smoking and by marketing their products to children. The court imposed most of the requested remedies, and rejected the defendants' argument that their statements were protected by the First Amendment, holding that the amendment does not protect "knowingly fraudulent" statements. The tobacco companies appealed the ruling but a three-judge panel of the U.S. Court of Appeals for the District of Columbia unanimously upheld the decision in 2009.

Lessons for the Climate Community

One theme to emerge from this review of tobacco litigation was the similarity between the tobacco industry's disinformation campaign and the fossil fuel industry's current efforts to sow confusion about climate change. As one participant put it, "The tobacco fight is now the climate fight." Both industries have adopted a strategy of disseminating disinformation to manufacture uncertainty and forestall governmental action, and in so doing, have placed corporate interests above the public interest. Several workshop participants presented detailed evidence of the close ties between the two industries in terms of personnel, nonprofit "front groups," and funders.

Given these close connections, many participants suggested that incriminating documents may exist that demonstrate collusion among the major fossil fuel companies, trade associations, and other industry-sponsored groups. Such documents could demonstrate companies' knowledge, for instance, that the use of their products damages human health and well-being by contributing to "dangerous anthropogenic interference with the climate system."[10]

Finally, participants agreed that most questions regarding how the courts might rule on climate change cases remain unanswered. Most participants also agreed that pursuing a

legal strategy against the fossil fuel industry would present a number of different obstacles and opportunities compared with those faced by litigants in the tobacco cases. As Roberta Walburn noted, however, both efforts do share an important public interest imperative: "People have been harmed and there should be justice," she said. "If you want to right a wrong you have to be bold."

3. Climate Legal Strategies: Options and Prospects

Tobacco started with a small box of documents. We used that to wedge open a large pattern of discovery. . . . It looks like where you are with climate is as good as it was with tobacco—probably even better. I think this is a very exciting possibility.

—Stanton Glantz

A wide variety of potential legal strategies were discussed at the workshop. Participants agreed that a variety of different approaches could prove successful in spurring action and engaging the public on global warming, with suggestions ranging from lawsuits brought under public nuisance laws (the grounds for almost all current environmental statutes) to libel claims against firms and front groups that malign the reputations of climate scientists.

Several participants warned of the potential polarizing effect of lawsuits. While it is never an easy decision to bring a lawsuit, they noted, litigants must understand that if they pursue such a course they should expect a protracted and expensive fight that requires careful planning. Among the issues discussed were the importance of seeking documents in the discovery process as well as the need to choose plaintiffs, defendants, and legal remedies wisely. Another issue of concern was the potential for a polarizing lawsuit to slow the broad cultural shift in public perception (see section 5).

Strategies to Win Access to Internal Documents

Having attested to the importance of seeking internal documents in the legal discovery phase of tobacco cases, lawyers at the workshop emphasized that there are many effective avenues for gaining access to such documents.

First, lawsuits are not the only way to win the release of documents. As one participant noted, congressional hearings can yield documents. In the case of tobacco, for instance, the infamous "Doubt is our product" document came out after being subpoenaed by Congress.[11] State attorneys general can also subpoena documents, raising the possibility that a single sympathetic state attorney general might have substantial success in bringing key internal documents to light. In addition, lawyers at the workshop noted that even grand juries convened by a district attorney could result in significant document discovery.

Jasper Teulings, general counsel for Greenpeace International, emphasized that the release of incriminating internal documents

from the fossil fuel industry would not only be relevant to American policy but could have widespread international implications.

Importance of Choosing Plaintiffs, Defendants, and Legal Remedies

Matt Pawa, a leading litigator on climate-related issues, discussed his current case, *Kivalina v. ExxonMobil Corporation, et al.*, now pending on appeal. The lawsuit, brought under public nuisance law, seeks monetary damages from the energy industry for the destruction of the native village of Kivalina, AK, by coastal flooding due to anthropogenic climate change. Damages have been estimated by the U.S. Army Corps of Engineers and the U.S. Government Accountability Office between $95 million and $400 million.

The suit was dismissed by a U.S. district court in 2009 on the grounds that regulating global warming emissions is a political rather than a legal issue that needs to be resolved by Congress and the executive branch rather than the courts. An appeal was filed with the Ninth Circuit Court of Appeals in November 2009, but was rejected in September 2012. The plaintiffs have yet to determine whether to take further legal action, either by calling for an *en banc* review of the appeal verdict or by re-filing the case in state court.

Pawa noted that in representing Kivalina, he chose a plaintiff whose stake in the case is patently evident, as is the harm that has come to the village. Because those facts remain largely beyond dispute, it puts the focus of the case squarely on attributing the damage to the defendants. Pawa has used the principle of "joint and several" liability, which (in his words) holds that, "If two guys are outside a bar and the plaintiff gets beaten up and only one technically does it but both of them collude in the activity, they can both be held responsible." Because Exxon and the other corporate defendants in the Kivalina case are indisputably large emitters of heat-trapping gases, Pawa said he will argue that they "are basically like the two guys outside that bar." To help with his argument of causation, Pawa will also argue that Exxon and the other defendants distorted the truth. He said that litigation not only allows him to pursue a remedy for some of those most vulnerable to the effects of climate change, but also serves as "a potentially powerful means to change corporate behavior."

Jasper Teulings recounted the unusual and controversial case in which Greenpeace International helped representatives from Micronesia—an island nation threatened by rising sea levels—request a transboundary environmental impact assessment (TEIA) in the Czech Republic, hoping to prevent the Czech government from granting a 30-year permit extension for a coal-fired power plant. That action, he said, led to a national debate about global warming in a country led by a climate skeptic, and the Czech environment minister ultimately resigned as a result. The case also drew the attention of the international media, including the *Wall Street Journal*, *Economist*, and *Financial Times*.[12]

Participants weighed the merits of legal strategies that target major carbon *emitters*, such as utilities, versus those that target carbon *producers*, such as coal, oil, and natural gas companies. In some cases, several lawyers at the workshop noted, emitters are better targets for litigation because it is easy to establish their responsibility for adding substantial amounts of carbon to the atmosphere. In other cases, however, plaintiffs might succeed in cases against the producers who unearthed the carbon in the first place.

In lawsuits targeting carbon producers, lawyers at the workshop agreed, plaintiffs need

to make evidence of a conspiracy a prominent part of their case. Richard Ayres, an experienced environmental attorney, suggested that the RICO Act, which had been used effectively against the tobacco industry, could similarly be used to bring a lawsuit against carbon producers. As Ayres noted, the RICO statute requires that a claimant establish the existence of a "criminal enterprise," and at least two acts of racketeering (with at least one having occurred within the past four years). It is not even clear, he added, whether plaintiffs need to show they were actually harmed by the defendant's actions. As Ayres put it, "RICO is not easy. It is certainly not a sure win. But such an action would effectively change the subject to the campaign of deception practiced by the coal, gas, and oil companies."

The issue of requesting an appropriate legal remedy was also discussed. As one of the workshop's lawyers said, "As we think about litigation, we need to consider: what does our carbon system look like with climate stabilization? It has to be something positive. Only then can we figure out what strategies we need to pursue." As important as this broad vision of a legal remedy is, this participant also emphasized the advantage of asking courts to do things they are already comfortable doing, noting that, "Even if your ultimate goal might be to shut down a company, you still might be wise to start out by asking for compensation for injured parties."

Other Potential Legal Strategies

False advertising claims

Naomi Oreskes, a historian of science at the University of California–San Diego, brought up the example of the Western Fuels Association, an industry-sponsored front group that has run ads containing demonstrably false information. Oreskes noted that she has some of the public relations memos from the group and asked whether a false advertising claim could be brought in such a case. Lawyers at the workshop said that public relations documents could probably be used as evidence in such a case but they cautioned that courts view claims designed to influence consumer behavior differently than they do those designed to influence legislative policy.

Some lawyers at the workshop did note that historical false advertising claims could be deemed relevant, especially if plaintiffs can show that the conduct has continued. In tobacco litigation, for example, plaintiffs have successfully gone back as far as four decades for evidence by establishing the existence of a continuing pattern by the tobacco industry.

Joe Mendelson, director of climate policy at the National Wildlife Federation, suggested that such a strategy might be employed to take on the coal industry's advertising campaign, which has targeted swing states whose attorneys general are unlikely to call out the ads' distortions. Such a legal case, Mendelson explained, might achieve a victory in terms of public education and engagement.

Libel suits

Lawyers at the workshop noted that libel lawsuits can be an effective response to the fossil fuel industry's attempts to discredit or silence atmospheric scientists. Pennsylvania State University's Michael Mann, for instance, has worked with a lawyer to threaten libel lawsuits for some of the things written about him in the media, and has already won one such case in Canada. Matt Pawa explained that libel cases merely require the claimant to establish falsity, recklessness, and harm. "What could be more harmful than impugning the integrity of a scientist's reputation?" Pawa asked. Roberta Walburn noted that libel suits can also serve

to obtain documents that might shed light on industry tactics.

Atmospheric trust litigation

Mary Christina Wood, professor of law at the University of Oregon, discussed her involvement with so-called atmospheric trust litigation, a legal strategy she pioneered that is now unfolding in all 50 states. The goal of the litigation—to force massive reforestation and soil carbon sequestration that would return the planet to a sustainable level of atmospheric carbon dioxide (350 parts per million)—is grounded in the internationally recognized principle known as the Public Trust Doctrine, first enunciated by the Roman Emperor Justinian.

Under this doctrine, a state or third-party corporation can be held liable for stealing from or damaging a resource—in this case, the atmosphere—that is held as a public trust. The beneficiaries in the case are citizens—both current and future—who claim that the defendants (the state or federal government or third-party corporations) have a duty to protect and not damage that resource, which they oversee or for which they bear some responsibility.

Wood noted that this legal action has several promising features: it is being brought by children, can highlight local impacts of climate change because it is being brought in every state, and is flexible enough to be brought against states, tribes, the federal government, or corporations. Wood said that while the atmospheric trust lawsuits are just starting, some 22 amicus briefs (in which law professors from around the country argue that the approach is legally viable) have already been filed.

Disagreement about the Risks of Litigation

Despite widespread endorsement by workshop participants of the potential value in pursuing legal strategies against the fossil fuel industry, some of the lawyers present expressed concern about the risks entailed should these cases be lost. As one participant put it, "We have very powerful laws and we need to think strategically about them so they won't be diminished by the establishment of a legal precedent or by drawing the attention of hostile legislators who might seek to undermine them."

Others, such as Sharon Eubanks, took issue with this perspective. "If you have a statute, you should use it," she said. "We had the case where people said, 'What if you screw up RICO?' But no matter what the outcome, litigation can offer an opportunity to inform the public." Stanton Glantz concurred with this assessment. As he put it, "I can't think of any tobacco litigation that backfired; I can't think of a single case where litigation resulted in bad law being made."

4. Attribution of Impacts and Damages: Scientific and Legal Aspects

Why should taxpayers pay for adaptation to climate change? That is a sound bite that I don't hear used. Why should taxpayers bear the risk? Perhaps that question alone can help shift public perception.

—Myles Allen

Several sessions at the workshop addressed a variety of vexing issues concerning the extent to which localized environmental impacts can be accurately attributed to global warming and how, in turn, global warming impacts might be attributed to specific carbon emitters or producers. Many challenges are involved in these kinds of linkages, from getting the science right to communicating it effectively.

Myles Allen, a climate scientist at Oxford University, suggested that while it is laudable to single out the 400 Kivalina villagers, all 7 billion inhabitants of the planet are victims of climate change. He noted, for instance, that while the United Nations Framework Convention on Climate Change makes an inventory of global warming emissions, it does not issue an inventory of who is being affected. As he put it, "Why should taxpayers pay for adaptation to climate change? That is a sound bite that I don't hear used. Why should taxpayers bear the risk? Perhaps that question alone can help shift public perception."

Allen also noted that the scientific community has frequently been guilty of talking about the climate of the twenty-second century rather than what's happening now. As a result, he said, people too often tend to perceive climate change as a problem for our grandchildren.

Challenges of Attributing Environmental Effects to Anthropogenic Climate Change

Several of the climate scientists at the meeting addressed the scientific challenges involved in attributing specific environmental effects to anthropogenic climate change. For example, global warming, natural variability, population exposure, and population vulnerability are all factors in the disasters that make headlines. Myles Allen noted that while scientists can accurately speak about increases in average global temperature, such large-scale temperature measurements are difficult to link to specific individuals.

Claudia Tebaldi, a climate scientist at Climate Central, emphasized the problem of confounding factors: "If you want to have statistically significant results about what has already happened [on the health impacts of climate change]," she said, "we are far from being able to say anything definitive because the signal is so often overwhelmed by noise."

Given that nearly all consequences have multiple causes, Tebaldi reviewed the difficulties entailed in efforts at so-called *single-step attribution* (in which a single variable is added or removed from a model), *multi-step attribution* (in which two or more attribution linkages are drawn), and *associative patterns of attribution* (in which linkages are mapped over time in order to detect possible patterns). She noted that the authors of the 2007 Intergovernmental Panel on Climate Change report were relatively comfortable attributing certain environmental phenomena to climate change: changes in snow/ice/frozen ground; increased runoff and anticipated snowmelt in spring; warmer water temperatures and changes in salinity, oxygen levels, and ocean acidification. But she added that it is still hard to say anything statistically significant about some key areas of concern.

Climate scientist Mike MacCracken expressed more optimism about the ability of scientists to identify patterns of changes. The traditional view, he explained, is that one cannot attribute a single weather event to human-induced climate change, but climate change reflects a difference in the frequency and intensity of weather events from the past—that is how the term is defined. So, as the distribution of weather events changes, we are seeing an increasing likelihood of what were once very rare events, but are likely to become much more frequent.

Myles Allen agreed that scientists could be far more confident about a group of events rather than a single event, but noted, "Then you are talking again about climate [as opposed to weather]. We can say with confidence how the risks are changing. Absolutely. And some harms can be caused by change in risk. But we are still talking about probabilities." As an example, Allen cited work by Stefan Rahmstorf and Dim Coumou, who found an 80 percent probability that the July 2010 heat record would not have occurred without global warming.[13]

Absolutely crucial is real progress on regional and local consequences of climate change. We have general notions that the Southwest will be drier. But once the science is able to say with confidence what will happen in the states of Colorado and Arizona, then the people who live there will want to pressure their representatives to fix their problem. Then political people will be much more responsive to the issue. That will be real progress in the next few years.

—Lew Branscomb

Others agreed that many different types of aggregate findings can be useful. Paul Slovic, for instance, cited the example of the book *At War with the Weather* by Howard Kunreuther. In studying economic losses from natural disasters, Kunreuther found an exponential increase in losses incurred over the last 10 or 20 years.[14] Again, multiple factors need to be teased apart, such as the growth in population exposed to natural disasters, increased infrastructure replacement costs, natural variability, and the influence of climate change.[15]

Mike MacCracken suggested that issues related to the science itself are distinct from how findings should be communicated to the public. "The challenge," he said, "is finding an effective lexicon that scientists are comfortable with." Along these lines, one participant suggested that it could be helpful to communicate findings framed as a discussion. For example, a farmer could ask a question

saying, "I'm concerned because I'm seeing *this* [particular local weather]." The scientist can comfortably respond: "You're right to be concerned because we are seeing *this*, *this*, and *this* [aggregate effect or strong probability of anthropogenic warming]."

Lew Branscomb, a physicist, governmental policy expert, and one of the meeting's organizers, suggested that the evolution of climate science is an important issue. As he put it, "Absolutely crucial is real progress on regional and local consequences of climate change. We have general notions that the Southwest will be drier. But once the science is able to say with confidence what will happen in the states of Colorado and Arizona, then the people who live there will want to pressure their representatives to fix their problem. Then political people will be much more responsive to the issue. That will be real progress in the next few years."

Determining Appropriate Standards of Evidence

A discussion arose at the workshop about the appropriate standard of evidence required when attributing specific environmental phenomena to global warming and establishing the culpability of carbon emitters and producers. Naomi Oreskes noted the important differences among standards of evidence in science, in law, and in public perception.

As she explained, "When we take these things to the public, I think we often make a category error. We take a standard of evidence applied internally to science and use it externally. That's part of why it is so hard to communicate to the public." Oreskes pointed out that the "95 percent proof rule" widely accepted among scientists might not be appropriate in this application. That standard of proof, she said, "is not the Eleventh Commandment. There is nothing in nature that taught us that 95 percent is needed. That is a social convention. Statistics are often used when we don't understand the mechanisms of causation. But what if we do know what the mechanisms are? For instance, if we know how a bullet kills a human, we don't need statistics to prove that bullets can kill."

Oreskes went on to note that scientific knowledge in the field of climate science is very robust—more robust than in many other fields such as plate tectonics or relativity. This observation led her to wonder why climate scientists have been so reticent about communicating their results, and to postulate that in accepting such a high standard of proof, "The scientific community has been influenced by push-back from industry."

Stanton Glantz drew a comparison to his work with the Centers for Disease Control establishing a link between smoking and breast cancer. "I fought CDC on the links between smoking and breast cancer," he recalled. "There were 17 studies. How could you make a statement that there was no link? The epidemiologists focus on statistics but we already knew about the biology of breast cancer and damage to DNA and links to tobacco. My argument was that you needed to look at a whole body of evidence. . . . We compared the breast cancer evidence, which is stronger than the original lung cancer evidence, and that got accepted and became the default position. But the fact is, not everyone who smokes gets cancer."

For climate change, Glantz said, all the pieces fit together and they represent a consistent body of evidence. He added that criminal trials use the standard of "beyond a reasonable doubt." But as he put it, "Scientists have been making the 'reasonable doubt' standard higher and higher."

Some of the scientists at the workshop, however, took issue with the idea that they

ought to apply different standards of proof to their work. Claudia Tebaldi, for instance, responded, "As a scientist I need to have two different standards? I don't see that. I am not convinced that I should lower my standards of skepticism when I talk to the public. As a scientist I give you the probability. It is not my job to change my paper if the consequences are so bad. That is the job of a policy maker working with my results."

Mary Christina Wood reminded the group that the medical profession is adept at juggling two very different standards: the standard of proof and the standard of care, and suggested that climate scientists might be able to do something similar. Dick Ayres agreed, emphasizing that, "Too high a standard of proof increases the burden on those who seek to protect public health."

Myles Allen noted that a key problem always comes back to the issue of doubt. "If you grab a scientist off the street and ask whether we *could* have had this weather event without global warming, they will likely say yes, it could have been possible. So the reality is that there will always be a scientist available to fill that role in the court of law." The vexing thing, Allen said, is "trying to make clear to the public that there are two uncertainties. We can be very certain about what is happening and yet very uncertain about what is going to happen tomorrow or next year."

Attributing Environmental Damage to Carbon Producers

Richard Heede, co-founder and director of the Climate Accountability Institute, presented a preview of a research project several years in the making, in which he has been quantifying the annual and cumulative global warming emissions attributable to each of the world's major carbon producers. By closely reviewing annual reports and other public sources of information from the energy sector, Heede is working to derive the proportion of the planet's atmospheric carbon load that is traceable to the fossil fuels produced and marketed by each of these companies annually from 1864 to 2010. The work deducts for carbon sequestered in non-energy products such as petrochemicals, lubricants, and road oil, and quantifies annual and cumulative emissions to the atmosphere attributable to each company. The research is still awaiting peer review before it can be finalized and publicized.

Most of the workshop's participants responded positively to Heede's research. Matt Pawa thought the information could prove quite useful in helping to establish joint and several liability in tort cases, but he cautioned that, in practice, a judge would likely hesitate to exert joint and several liability against a carbon-producing company if the lion's share of carbon dioxide in the atmosphere could *not* be attributed to that company specifically. Nevertheless, he said this kind of accounting would no doubt inspire more litigation that could have a powerful effect in beginning to change corporate behavior.

Other participants reacted positively to other aspects of Heede's research. Angela Anderson, director of the climate and energy program at the Union of Concerned Scientists, noted for instance that it could potentially be useful as part of a coordinated campaign to identify key climate "wrongdoers." Mary Christina Wood agreed, saying the preliminary data resonated strongly with her, making her feel like "Polluters did this and they need to clean this up." Other participants noted that it could be helpful in the international realm by changing the narrative that currently holds nations solely responsible for the carbon emitted by parties within their own borders. Finding

the specific companies responsible for emissions, they said, cuts a notably different way.

One concern raised was that some in the "American middle" might perceive it as unfair to go after a company that didn't know carbon dioxide was harmful for much of the extended period Heede reviewed. To get a sense of this, some suggested reaching out to someone like public opinion specialist Tony Leiserowitz who could undertake polling to see how such research might be received by different segments of the public.

Robert Proctor suggested that the most effective public communication about the research would use the simplest formulation possible. One effective strategy in the fight against tobacco, he observed, was equating a year's production of cigarettes in a particular factory to a number of deaths. Anti-tobacco activists determined that there was one smoking-related death for every one million cigarettes produced. As Proctor explained, given that the industry made roughly one cent in profit per cigarette, that meant a company such as Philip Morris made $10,000 in profit for every death its products caused. Proctor suggested a similar strategy could be adapted to link the largest corporate carbon producers to specific climate impacts. If numbers could be generated for how many deaths per year were caused by each degree rise in global temperature, for instance, a similar case could be made against a particular company that produced or emitted a known percentage of the carbon load contributing to global warming.

Picking up on this notion, Naomi Oreskes suggested that some portion of sea level rise could be attributed to the emissions caused by a single carbon-producing company. In essence, she suggested, "You might be able to say, 'Here's Exxon's contribution to what's happening to Key West or Venice.'" Myles Allen agreed in principle but said the calculations required, while not complicated, were easy to get wrong.

Whether or not the attribution would hold up in court, Stanton Glantz expressed some enthusiasm about such a strategy, based on his experience with tobacco litigation. As he put it, "I would be surprised if the industry chose to attack the calculation that one foot of flooding in Key West could be attributed to ExxonMobil. They will not want to argue that you are wrong and they are really only responsible for one half-foot. That is not an argument they want to have." For similar reasons, he said, tobacco companies have never challenged death estimates, noting, "Their PR people tell them not to do that, focusing instead on more general denial and other tactics."

Evidence of Collusion and Prospects for Constructive Engagement

Participants at the workshop also discussed one other aspect of attribution: the close connections among climate change deniers, the fossil fuel industry, and even the tobacco companies. John Mashey, a computer scientist and entrepreneur who has meticulously analyzed climate change deniers, presented a brief overview of some of his research, which traces funding, personnel, and messaging connections between roughly 600 individuals and 100 organizations in the climate change denial camp.[16] Mashey noted that looking closely at the relationships between these parties—via documents, meetings, e-mails, and other sources—can help clarify the extent of collusion involved in sowing confusion on the issue. Mashey cited, for instance, memos that have surfaced from a 1998 "climate denial" plan involving most of the major oil companies (under the auspices of the American Petroleum Institute) that set the

stage for much of the disinformation of the past 10 years.[17]

A number of participants ultimately agreed that the various linkages and attribution data could help build a broad public narrative along the following lines:

- We have a serious problem (as shown by the science)
- We know the people responsible are the same ones responsible for a campaign of confusion
- There are solutions, but we can't get to them because of the confusion these companies have funded

Finally, there was some fundamental disagreement over the potential for engagement with the fossil fuel industry. Richard Heede expressed optimism, saying, "I would love to envision constructive engagement with industry. That would mean convincing them to participate in a plan that 'could make life worth living for future generations.'"

Some veterans of the tobacco control campaign voiced skepticism, however. Stanton Glantz recalled two instances in which activists sought engagement with the industry. In one, the National Cancer Institute met with tobacco companies to try to persuade them to make less dangerous cigarettes. "The tobacco companies used it as an opportunity to undertake intelligence gathering about health groups and it was a disaster," he recalled. Glantz did note a fundamental difference between tobacco and climate change, however: while tobacco companies offer no useful product, he explained, "The fact is we do need some form of energy. Unless other alternative energy firms replace the current carbon producers, which seems unlikely, at some point there will likely have to be some kind of positive engagement. Less clear, however, is how best to create a political environment for that engagement to work."

5. Public Opinion and Climate Accountability

The watershed moment was the congressional hearing when the tobacco companies lied and the public knew it. If that had occurred earlier, the public might not have so clearly recognized that the executives were lying. My question is: What do we know about how public opinion changed over time?

—Peter Frumhoff

Throughout several sessions, workshop participants discussed and debated the role of public opinion in both tobacco and climate accountability. It was widely agreed that, in the case of tobacco control, a turning point in public perception came at the 1994 "Waxman hearings" on the regulation of tobacco products.[18] On this highly publicized occasion, a broad swath of the populace became aware that the heads of the major tobacco companies had lied to Congress and the American public. Naomi Oreskes said tobacco litigation helped make this public narrative possible.

Participants grappled with the question of how climate advocates might create a similar narrative for global warming. While there was a good deal of debate about exactly what such a narrative should be, there was widespread agreement that the public is unlikely to be spurred into action to combat global warming on the basis of scientific evidence alone. Furthermore, climate change science is so complex that skeptics within the scientific community can create doubts in the public mind without any assistance from the fossil fuel industry or other climate change deniers.

The Importance of Creating a Public Narrative

Jim Hoggan, a public relations expert and co-founder of DeSmogBlog.com, explained the problem this way: "The public debate about climate change is choked with a smog of misinformation. Denial and bitter adversarial rhetoric are turning the public away from the issue. Communicating into such high levels of public mistrust and disinterest is tricky. We need to do some research into a new narrative." Hoggan emphasized the importance of linking the industry's "unjust misinformation" back to an overall narrative about sustainability, rather than getting mired in issues of whose fault climate change is and who should do what to ameliorate the situation. Noting the fact that there is broad and deep support for clean energy, Hoggan suggested the following narrative: "Coal, oil, and gas companies are engaging in a fraudulent attempt to stop the development of clean energy."

Many participants agreed about the importance of framing a compelling public narrative. Dick Ayres added that the simple act of naming an issue or campaign can be important as well. After acid rain legislation passed in 1990, he recalled, an industry lobbyist told him, "You won this fight 10 years ago when you chose to use the words 'acid rain.'"

Paul Slovic, a psychologist and expert on risk perception, cited his colleague Daniel Kahneman's book *Thinking, Fast and Slow*, which has shown that people often tend to make snap judgments rather than stopping to analyze.[19] Though a degree of slow thinking is necessary to comprehend climate change, he said, people instead tend to go with their quick first impressions.

Having reviewed two boxes of documents obtained from tobacco marketers by the Justice Department for its RICO case against the tobacco companies, Slovic became convinced that the industry was decades ahead of academic psychologists in understanding the interplay of emotion and reason in decision making. The sophistication of the cigarette makers' approach showed, he said, in the effectiveness with which they used images of beautiful people doing exciting things, or words like "natural" and "light" that conveyed health (in response to mounting evidence of smoking's link to lung cancer).

Slovic emphasized that there are huge differences between tobacco and climate risks. "Every hazard is unique, with its own personality, so to speak," he said. "Does it pose a risk to future generations? Does it evoke feelings of dread? Those differences can make an impact on strategy." The feeling of dread, specifically, was an important feature in people's perception of tobacco risks, since they equated smoking with lung cancer.

Here is one possibility for a public narrative: "Coal, oil, and gas companies are engaging in a fraudulent attempt to stop the development of clean energy."

—Jim Hoggan

This differs from "doom-and-gloom" discussions about climate change, which can tend to turn people off rather than instilling dread. The difference is that climate change risks seem diffuse—distant in both time and location. The situation is even more complicated, Slovic added, by the fact that when people receive a benefit from an activity, they are more inclined to think the risk that activity carries is low. If they receive little benefit, they tend to think the risk is higher. As he explained, "The activities that contribute to climate change are highly beneficial to us. We love them; we are addicted to them." That, he said, makes the problem of communicating the dangers of climate change all the more difficult.

Reaching People "Where They Live"

Several participants emphasized the phenomenon of cultural cognition, including work on the subject by Dan Kahan at Yale Law School.[20] Cultural cognition research suggests that we all carry around with us a vision of a just social order for the world in which we live. Kahan's work identifies a major division between those who tend toward a worldview based on structure and hierarchy, and those who tend toward a worldview based on egalitarianism. Another axis is individualism versus communitarianism (i.e., whether a higher value is placed on the welfare of the individual or the group). In Kahan's conception, all of us have a blend of such attributes.

Attitudes on climate change are highly correlated with these views. As a result, it is difficult to change people's views on the issue because, when they receive information, they tend to spin it to reflect their favored worldview. In light of this research, several participants expressed concern that a revelation about documents from oil companies might not work to change many minds, given the power of such pre-existing worldviews.

Brenda Ekwurzel, a climate scientist at the Union of Concerned Scientists (UCS), recounted her organization's experience with this variable, explaining that UCS, as a science-based organization, contends with an "information fire hose" when it comes to climate change. As she put it, "We love data. We scientists tend to focus on the frontal lobe and we need communications folks to remind us that there are other parts of our brain too." She said she always wants to begin a discussion by saying, "Let's talk about climate change." But that, it turns out, is not necessarily the best starting point—she has learned that it's better to start with: "Let's talk about what you care about most." The answer is likely to be family, friends, livelihood, health, and recreation.

Ekwurzel highlighted polling data that have shown some 77 percent of people in Kahan's egalitarian/communitarian sector believe experts agree about climate change, while 80 percent of those in the hierarchical/individualist camp believe experts disagree about climate change. To overcome that barrier, UCS staff responsible for communicating about climate change began experimenting, in one case addressing an issue of great concern to a very specific constituency: the correlation between August high school football practices in Texas and an increase in heat stroke among the student athletes.

This effort, launched to coincide with the first week of football practice in Texas and Oklahoma, proved remarkably successful, Ekwurzel said, drawing local media attention in a region the organization rarely reached. It also encouraged commentary from a different set of voices than those who normally talk about global-warming-related issues, such as medical professionals. It may have been a coincidence, Ekwurzel admitted, but within six weeks of this campaign the state of Texas decided to scale back high school football practices in the summer—and the message about the consequences of warmer summers in the region reached a largely untapped audience for UCS.[21]

Every hazard is unique, with its own personality, so to speak. Does it pose a risk to future generations? Does it evoke feelings of dread? Those differences can make an impact on strategy.

—Paul Slovic

Identifying Wrongdoers

Participants at the workshop also discussed the benefits and risks associated with identifying wrongdoers as part of a public narrative. Some participants, such as Paul Slovic, argued that this could prove an effective strategy. Slovic cited research by Roy Baumeister and Brad Bushman suggesting that, when it comes to messages, "bad is stronger than good"—a finding that helps explain the tendency toward negative advertising in political campaigning.[22] Claudia Tebaldi said she believed "there is a big difference between convincing people there is a problem and mobilizing them. To mobilize, people often need to be outraged."

On the other hand, several of the public opinion experts cautioned that "argument tends to trigger counter-argument." By contrast, they pointed out, emotional messages don't tend to trigger counter-emotions. "Abuse breeds abuse," explained Dan Yankelovich, co-founder of Public Agenda, a nonpartisan group devoted to public opinion research and citizen education. "In this case, you have industry being abusive. But you do not want to demonize the industry. The objective ought to be to have the public take this issue so seriously that people change their behavior and pressure industry to alter their current practices. In the end, we want industry to be more receptive to this pressure, not less."

For this reason and others, several participants expressed reservations about implementing an overly litigious strategy at this political moment. Perhaps the strongest proponent of this view was Yankelovich, who explained, "I am concerned about so much emphasis on legal strategies. The point of departure is a confused, conflicted, inattentive public. Are legal strategies the most effective strategies? I believe they are important after the public agrees how to feel about an issue. Then you can sew it up legally." In the face of a confused, conflicted, and inattentive public, legal strategies can be a double-edged sword, he continued: "The more adversarial the discourse, the more minds are going to be closed." In response to a comment by Richard Ayres, however, Yankelovich agreed that a legal strategy focused on the industry's disinformation campaign could help advance public opinion on global warming, as it did in the case of tobacco.

Jim Hoggan advised, "It's like that old adage that says, 'Never get into a fight with a pig in public. The pig likes it. You both get dirty. And, after a while, people can't tell the difference.'"

I am concerned about so much emphasis on legal strategies. The point of departure is a confused, conflicted, inattentive public. Are legal strategies the most effective strategies? I believe they are important after the public agrees how to feel about an issue. Then you can sew it up legally. Legal strategies themselves are a double-edged sword. The more adversarial the discourse, the more minds are going to be closed.

—Daniel Yankelovich

Dan Yankelovich also described his theory of the "public learning curve," which holds that public opinion moves through three recognizable phases on issues like smoking or climate change. The first is the "consciousness-raising" phase, during which the media can help dramatically to draw attention to an issue. This is followed by the "working-through" phase, during which things bog down as the public struggles over how to adapt to painful, difficult change. Yankelovich noted a paucity of institutions that can help the public work through this phase, which is frequently marked by the kind of denial and wishful thinking recognizable today in public opinion about climate change. He argued that only when the public begins to move into the third phase of "thoughtful public judgment" can legal strategies prove most effective and ultimately produce laws and regulations.

As he explained, "My sense is we are not there yet on climate change. The media has not been a help. The opposition has been successful in throwing sand in the works. People are just beginning to enter the open-minded stage. We are not decades away but I don't have enough empirical data. My sense is that it may take about three to five more years."

The Prospects for a "Dialogic" Approach and Positive Vision

Given the fact that the climate advocacy community has not yet coalesced around a compelling public narrative, Dan Yankelovich suggested that the topic could be a good candidate for engaging in a relatively new public opinion technique known as the "dialogic method," in which representative groups holding different views on a subject meet over the course of a day or more to develop a narrative in an iterative fashion. The benefit of this method, he said, is that climate advocates could essentially work in partnership with the public "by having them help shape a narrative that is compelling."

Yankelovich argued that the narrative must convey deep emotion to cut through the apathy and uncertainty prevalent in public opinion on the issue today, which has made it easier for the fossil fuel industry to sow confusion. In considering these emotional components of the narrative, he noted that anger is likely to be one of the major candidates but there may be others as well, adding that, "The notion of a custodial responsibility and concern also has deep resonance." Finding the right public narrative, Yankelovich suggested, could help accelerate public opinion through the second phase of the curve within the next five years.

In one interesting example of mobilizing public opinion on an issue, Mary Christina Wood drew the group's attention to the "victory speakers" campaign in World War II. When the U.S. government was contemplating entering the war, the threat of Nazi Germany seemed too far away to many Americans, who were reluctant to change their lives to mobilize for war. In response, the government orchestrated a campaign in which some 100,000 speakers, including Wood's mother and grandmother, made five speeches each day about the need for U.S. involvement.[23] Wood suggested that the campaign helped mobilize the American people remarkably quickly.

Finally, several participants voiced strong support for the need to create a positive vision as part of the public narrative about climate change. As Naomi Oreskes put it, citing Ted Nordhaus and Michael Schellenberger's article "The Death of Environmentalism,"[24] "Martin Luther King did not say, 'I have a nightmare'! King looked at a nightmare but he painted a positive vision. Abolitionists did not say, 'We have to collapse the economy of the South,' even if that is what happened. No one wants to hear you are a bad person or that the way you live is bad." Lew Branscomb concurred, noting that, "There has got to be a future people think is worth struggling for."

6. Conclusion

There was widespread agreement among workshop participants that multiple, complementary strategies will be needed moving forward.

Workshop participants unanimously agreed that the sessions yielded a productive and well-timed interdisciplinary dialogue. Participants from the scientific and legal communities seemed especially appreciative for the opportunity to engage so intensively with experts outside their usual professional circles. The only potential gaps identified by attendees were a lack of participants from the insurance industry and a lack of emphasis on the biotic effects of climate change.

Participants made commitments to continue the discussion and collaborate on a number of the efforts discussed at the meeting. In particular, several participants agreed to work together on some of the attribution work already under way, including efforts to help publicize attribution findings in a way that will be easy for the general public to understand, and build an advocacy component around those findings. Others proposed an informal subgroup to pursue Dan Yankelovich's suggestion of using the dialogic method in conjunction with public relations specialists to help develop an effective public narrative.

Participants also made commitments to try to coordinate future efforts, continue discussing strategies for gaining access to internal documents from the fossil fuel industry and its affiliated climate denial network, and to help build an accessible repository for those documents that are obtained.

Points of Agreement

There was widespread agreement among workshop participants that multiple, complementary strategies will be needed moving forward. For instance, in terms of what the "cancer" analog for global warming might be, participants generally accepted the proposition put forth by Angela Anderson that the answer might differ by region, with sea level rise instilling the most concern on the coasts, and extreme heat proving most compelling in the Midwest. Participants also agreed that it is better to focus on consequences of climate change happening now rather than on those projected for the distant future. Brenda Ekwurzel's anecdote about the public's engagement on the issue of high school football was offered as an example of the power that highlighting such immediate consequences can have.

Equally important was the nearly unanimous agreement on the importance of legal actions, both in wresting potentially useful internal documents from the fossil fuel industry and, more broadly, in maintaining pressure on the industry that could eventually lead to its support for legislative and regulatory responses to global warming. Some participants stated that pressure from the courts offers the best

current hope for gaining the energy industry's cooperation in converting to renewable energy.

Dan Yankelovich expressed a widely held sentiment when he noted what he called "a process of convergence" over the course of the workshop, in which participants with different expertise gradually incorporated broader perspectives on the problem at hand. "I know I found the tobacco example and the range of possible legal strategies very instructive," he said.

Unresolved Issues

Perhaps the largest unresolved issues from the workshop were some disagreement over how adversarial in tone efforts targeting the fossil fuel industry should be, and the extent to which outrage can mobilize the public.

On the latter point, one participant noted, "Outrage is hugely important to generate. Language that holds carbon producers accountable should be an important part of the narrative we create." But a number of participants expressed reservations about any plans that "demonized" the fossil fuel industry.

Myles Allen, for instance, worried that too adversarial a tone "could hand a victory to the 'merchants of doubt.'" He explained that because the fossil fuel industry's disinformation has effectively muted a large portion of the electorate, "Our focus ought to be to bring as many of these people back to the table and motivate them to act. We need to somehow promote a debate among different parts of the legislature to get this happening."

Lew Branscomb agreed that efforts should not seek to demonize the fossil fuel industry, noting that, "There are a lot of companies in the oil and auto business, and some of the companies will come forward on the good side. We all need their cooperation. My notion is to try to find people in the industry producing carbon who will come around." To accomplish this, he suggested a strategy that emphasizes facts and doesn't impugn motives.

It is possible to see glimmers of an emerging consensus on a strategy that incorporates legal action with a narrative that creates public outrage.

Brenda Ekwurzel lent some historical support to such a view by citing Adam Hochschild's book *Bury the Chains*, about the long campaign to end slavery. Hochschild noted, she said, that one of the most influential pamphlets published in the abolitionists' fight offered a dispassionate accounting of facts and details about the slave trade gathered from witnesses who had participated in it. This publication had no trace of the moral finger-wagging that had marked virtually all prior pamphlets. Instead, the facts—especially a famous diagram of a slave ship—carried the day and became widely accepted. Women in the United Kingdom, for instance, soon started serving tea using only sugar that had been certified as not having come from the slave trade.[25] "Maybe," Ekwurzel suggested, "we need an analogous effort to offer certified energy sources from suppliers who do not spread disinformation."

Mike MacCracken supported the need to "win the middle." As he noted, "We have had an international consensus of scientists agreeing to key facts since 1990."

Angela Anderson said she hoped UCS could contribute meaningfully to the public's "working-through" stage of the process outlined by Dan Yankelovich. She noted that local climate adaptation stories offer a way to sidestep the controversy, but acknowledged that it is still an open question whether this

strategy helps people work through the issue and ultimately accept climate science as fact. "This is our theory," she said, "But we don't have the research yet to prove this." Anderson added that many people expect UCS, as a science-based organization, to correct misinformation about climate science. "I don't want to abdicate that responsibility," she said, "and I wrestle with this, wondering what is the most effective order in which to do things and the right tone?"

While many questions like these remain unresolved, the workshop made an important contribution to the quest for answers. And it is possible to see glimmers of an emerging consensus on a strategy that incorporates legal action (for document procurement and accountability) with a narrative that creates public outrage—not to demonize industry, but to illuminate the collusion and fraudulent activities that prevent us from building the sustainable future we need and our children deserve.

Endnotes

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Appendix A: Workshop Agenda

Climate Accountability, Public Opinion, and Legal Strategies

Martin Johnson House, Scripps Institution of Oceanography, La Jolla, CA
June 14–15, 2012

Workshop Goals

- Compare the evolution of public attitudes and legal strategies for tobacco control and anthropogenic climate change. Can we use the lessons from tobacco education, laws, and litigation to address climate change?
- Explore which impacts can be most compellingly attributed to climate change, both scientifically and in the public mind, and consider options for communicating the scientific understanding of attribution in ways most useful to inform both public understanding and mitigation strategies.
- Explore the degree to which public (including judge and jury) acceptance of the causal relationships of climate impacts to fossil fuel production and/or emissions would increase the prospects for an effective strategy for U.S.-focused climate mitigation.
- Consider the viability of diverse strategies, including the legal merits of targeting carbon producers—as opposed to carbon emitters—for U.S.-focused climate mitigation.
- Identify promising legal and other options and scope out the development of mutually reinforcing intellectual, legal, and/or public strategies to further them.

June 14, 2012

7:45 a.m. Meet in La Jolla Shores Hotel lobby for shuttle to workshop venue

8:00 a.m. Coffee, light breakfast

8:30 a.m. Welcome and charge to participants

9:00 a.m. **Session 1. The Lay of the Land: Key Issues and Concepts**

Five presentations @ five minutes each, with limit of one image/visual aid; followed by moderated discussion

Proctor: A brief history of the tobacco wars: epidemiology, "doubt is our product," litigation and other strategies

Allen: Climate science and attribution

Heede: Attribution of emissions to carbon producers

Pawa: The legal landscape: fundamentals of law, climate change, damages, plaintiffs, and defendants

Slovic: Public opinion and risk perception on tobacco and climate

10:30 a.m. Break

11:00 a.m. **Session 2. Lessons From Tobacco Control: Legal and Public Strategies**

Three presentations @ seven minutes each, with limit of one image/visual aid; followed by moderated discussion

Sharon Eubanks, Stanton Glantz, Robert Proctor, Roberta Walburn: Litigation, media strategies, coordination with grassroots efforts, etc.

Key issue: What lessons can we draw from the history of public and legal strategies for controlling tobacco that might be applicable to address climate change?

12:30 p.m. Lunch

1:30 p.m. **Session 3. Attribution of Impacts and Associated Damages to Carbon and Climate Change: State of the Science and Expert Judgment**

Two presentations @ less than 10 minutes each; followed by moderated discussion

On science: Myles Allen and Claudia Tebaldi

Lead discussant: Mike MacCracken

Key issue: What impacts can be most compellingly attributed to carbon and climate change?

3:00 p.m. Break

3:15 p.m. **Session 4. Climate Legal Strategies: Options and Prospects**

Three presentations @ seven minutes each; followed by moderated discussion

Presenters: Matt Pawa, Mims Wood, Richard Ayres

Key issues: What potential options for U.S.-focused climate litigation appear most promising? To what extent would greater public (including judge and jury) acceptance of the causal relationships of climate impacts to fossil fuel production and/or emissions enhance the prospects for success?

5:00 p.m. Wrap up

Shuttle service will be provided for the return trip to the hotel

6:30 p.m. Drinks and dinner at the home of Lew and Connie Branscomb

Shuttle will be provided from La Jolla Shores Hotel

June 15, 2012

7:45 a.m. Meet in La Jolla Shores Hotel lobby for shuttle to workshop venue

8:00 a.m. Coffee, light breakfast

8:30 a.m. **Session 5. Attribution of Emissions to Carbon Producers**

Presentation @ 10 minutes; followed by moderated discussion

Heede: Carbon majors analysis

Lead discussant: Matt Pawa

Key issue: Can new analyses increase the prospect for holding major carbon producers legally and publicly accountable?

9:30 a.m. **Session 6. Innovative Strategies for Climate Accountability**

One to two presentations @ seven minutes each; followed by moderated discussion

Jim Hoggan, John Mashey

Key issues: What potential options for U.S.-focused climate litigation appear most promising? To what extent would greater public (including judge and jury) acceptance of the causal relationships of climate impacts to fossil fuel production and/or emissions enhance the prospects for success? What types of non-litigation public pressure might enhance their prospects for success?

11:00 a.m. Break

11:15 a.m. **Session 7. Public Opinion and Climate Accountability**

Moderated discussion drawing from key perspectives in public opinion

Speakers: Dan Yankelovich, Paul Slovic, Brenda Ekwurzel

Key issues: What is the role of public opinion in climate accountability?

12:45 p.m. Lunch

2:00 p.m. **Session 8. Discussion, outcomes, next steps**

4:00 p.m. Wrap up

Shuttle service will be provided for the return trip to the hotel

7:30 p.m. Drinks and dinner at La Jolla Shores Hotel restaurant

Appendix B: Participants

Climate Accountability, Public Opinion, and Legal Strategies Workshop

June 14–15, 2012

Workshop Organizers

Naomi Oreskes
Professor of History and Science Studies, University of California–San Diego
Adjunct Professor of Geosciences, Scripps Institution of Oceanography

Peter C. Frumhoff
Director of Science and Policy, Union of Concerned Scientists
Cambridge, MA

Richard (Rick) Heede
Principal, Climate Mitigation Services
Co-Founder and Director, Climate Accountability Institute
Snowmass, CO

Lewis M. Branscomb
Aetna Professor of Public Policy and Corporate Management (emeritus), John F. Kennedy School of Government, Harvard University

Angela Ledford Anderson
Director, Climate and Energy Program, Union of Concerned Scientists
Washington, DC

Workshop Participants

Myles Allen
Professor of Geosystem Science, School of Geography & the Environment, University of Oxford
Environmental Change Institute, Oxford University Centre for the Environment

Richard (Dick) E. Ayres
Attorney, The Ayres Law Group
Washington, DC

Brenda Ekwurzel
Climate Scientist and Assistant Director of Climate Research and Analysis, Union of Concerned Scientists
Washington, DC

Sharon Y. Eubanks
Advocates for Justice, Chartered PC
Senior Counsel, Sanford Wittels & Heisler, LLP
Washington, DC

Stanton A. Glantz
Professor of Medicine, University of California–San Francisco
University of California Center for Tobacco Control Research & Education

James (Jim) Hoggan
President, Hoggan & Associates
Vancouver, BC

Michael (Mike) MacCracken
Chief Scientist for Climate Change Programs, Climate Institute
Washington, DC

John Mashey
Techviser
Portola Valley, CA

Joseph (Joe) Mendelson III
Director of Policy, Climate and Energy Program, National Wildlife Federation
Washington, DC

Matt Pawa
President, Pawa Law Group, PC
Founder, The Global Warming Legal Action Project
Newton Centre, MA

Robert N. Proctor
Professor of the History of Science, Stanford University

Paul Slovic
Founder and President, Decision Research
Eugene, OR

Claudia Tebaldi
Research Scientist, Climate Central
Boulder, CO

Jasper Teulings
General Counsel/Advocaat, Greenpeace International
Amsterdam

Roberta Walburn
Attorney
Minneapolis, MN

Mary Christina Wood
Philip H. Knight Professor and Faculty Director, Environmental and Natural Resources Law Program, University of Oregon School of Law

Daniel (Dan) Yankelovich
Chair and Co-Founder, Public Agenda
San Diego, CA

Rapporteur

Seth Shulman
Senior Staff Writer, Union of Concerned Scientists
Cambridge, MA

Pictured (L to R): Stanton Glantz, Richard Heede, Roberta Walburn (obscured), James Hoggan, Sharon Eubanks, Peter Frumhoff, Richard Ayres (obscured), Angela Anderson, Mary Christina Wood, Lewis Branscomb, Claudia Tebaldi, Brenda Ekwurzel, Naomi Oreskes, Robert Proctor (obscured), Joseph Mendelson, Seth Shulman, John Mashey (obscured), Myles Allen, Alison Kruger, Michael MacCracken. Not pictured: Matt Pawa, Paul Slovic, Jasper Teulings, Daniel Yankelovich.

Union of Concerned Scientists

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From: **Joe Mendelson** [redacted]
Subject: RE: Your participation: Climate Accountability workshop June 14-15, La Jolla
Date: May 31, 2012 at 12:08 PM
To: Mary Wood mwood@uoregon.edu, Unruh-Cohen, Ana Ana.UnruhCohen@mail.house.gov, Angela L. Anderson [redacted]
Cc: Angela L. Anderson [redacted], Matt Pawa [redacted], Mary Wood mwood@law.uoregon.edu, [redacted], janill.richards@doj.ca.gov, Alison Kruger [redacted], Peter Frumhoff [redacted], Naomi Oreskes naoreskes@ucsd.edu, Rick Heede [redacted], Isla Dane isla@uoregon.edu

JM

I have communicated this separately to Angela earlier, but I'm happy to do it as well.
Thanks,
Joe

From: Mary Wood [mailto:mwood@uoregon.edu]
Sent: Thursday, May 31, 2012 2:26 PM
To: Unruh-Cohen, Ana; Angela L. Anderson
Cc: Angela L. Anderson; Matt Pawa; Mary Wood; [redacted]; janill.richards@doj.ca.gov; Joe Mendelson; Alison Kruger; Peter Frumhoff; Naomi Oreskes; Rick Heede; Isla Dane
Subject: Re: Your participation: Climate Accountability workshop June 14-15, La Jolla

I'm happy to do it as well. I'm sorry I am now just responding. I was out last week at a conference. I'm copying Isla Dane, my new assistant. Canon left the law school. Thanks.
Mary

Mary Christina Wood
Philip H. Knight Professor
Faculty Director, Environmental and
Natural Resources Law Program
University of Oregon School of Law
1515 Agate St.
Eugene, OR 97403-1221
(541) 346-3842
mwood@law.uoregon.edu

On May 24, 2012, at 8:34 AM, Unruh-Cohen, Ana wrote:

Happy to do it.

Happy memorial day!
Ana

Ana Unruh Cohen, Ph.D.
Committee on Natural Resources

From: Angela L. Anderson [mailto:AAnderson@ucsusa.org]
Sent: Thursday, May 24, 2012 11:25 AM
To: [redacted]; mwood@law.uoregon.edu <mwood@law.uoregon.edu>; [redacted]; janill.richards@doj.ca.gov <janill.richards@doj.ca.gov>; [redacted]; Unruh-Cohen, Ana
Cc: canon@uoregon.edu <canon@uoregon.edu>; Alison Kruger <[redacted]>; Peter Frumhoff <[redacted]>; Naomi Oreskes (naoreskes@ucsd.edu) (naoreskes@ucsd.edu)

<naoreskes@ucsd.edu>; Rick Heede ([redacted])
<[redacted]>
Subject: Your participation: Climate Accountability workshop June 14-15, La Jolla

Dear all,

I am writing to share with you the draft agenda and participant list for the **June 14-15 workshop on Climate Accountability, Public Opinion and Legal Strategies, to be held at Scripps Institute of Oceanography in La Jolla**. I'm delighted that you're coming and look forward to working with you there.

I'm also writing to make an important request.

Session 4 in the afternoon of June 14th is intended to explore potential options for US-focused climate litigation. You'll see in the agenda that we are proposing to do so through a series of 3 succinct presentations (ca. 7 minutes each) followed by a moderated discussion.

What potential options for US-focused climate litigation appear most promising? To what extent would greater public (including judge and jury) acceptance of the causal relationships of climate impacts to fossil fuel production and/or emissions enhance the prospects for success?

I and my workshop co-organizers are asking each of you to make a presentation in this opening session in the following order:

Matt Pawa: What potential options for US-focused climate litigation appear most promising?
Mims Wood: What international legal strategies have potential for altering the climate debate in the US?
Richard Ayres: To what extent would greater public (including judge and jury) acceptance of the causal relationships of climate impacts to fossil fuel production and/or emissions enhance the prospects for success?

Our thinking is it would be best for these initial presentations be made with little or no visual aids – a slide or two at most if needed.

We'd like the lead discussants to be: Janill Richards, Joe Mendelson, Ana Unruh-Cohen. We will turn to you for reaction to the panel before opening the session up for general discussion.

Please let me know this week or next if you're able to take on these key roles, and if you have any questions or concerns. As needed, we can set up a time to talk in advance of the workshop.

Thanks so much!

Angela

Angela Ledford Anderson
Director, Climate and Energy Program
Union of Concerned Scientists
Direct line 202-331-5449
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