

The Natural Resource

Environmental and Natural Resources Law and Policy Program Director's Note

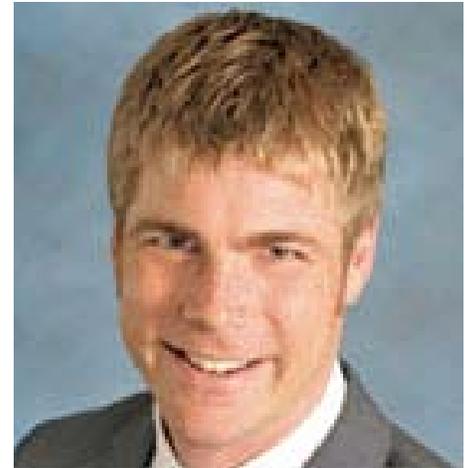


This year brings exciting news for our faculty. Most notably, Michael Wara joined SLS as a faculty member, and promises to help move us to a curriculum rooted in sustainability, reflecting the direction of the environmental field as a whole. Similarly, Clinic Director Deborah Sivas

was promoted to Professor (of Teaching), recognizing that, in addition to her important clinic litigation pursuits, she also contributes critical scholarship to the legal field. We are particularly proud of Debbie's California Lawyer's Attorney of the Year (CLAY) award, which underscores her distinction as a premier environmental lawyer as judged by her peers. Joining Debbie in the clinic is Leah Russin, our Clinical Fellow, bringing even greater litigation depth to our program.

Buzz Thompson was appointed Special Master by the US Supreme Court, acknowledging his expertise in environmental and water law. Tom Heller, along with several other Stanford faculty members who contribute to the UN Intergovernmental Panel on Climate Change, shared the Nobel Peace Prize with former Vice President Al Gore. And, I was named the Interim Director of the Center for Ocean Solutions, an exciting interdisciplinary and inter-institutional collaboration focused on elevating the impact of the sciences on ocean policy.

(continued on pg. 16)



Michael Wara '06, Stanford Assistant Professor of Law

Wara Joins SLS Faculty

In the fall of 2008, Michael Wara '06, PhD UCSC '03 was appointed to the Stanford Law School faculty. Trained as a lawyer and a scientist, Wara's current research focuses on the emerging global carbon trading market and mechanisms for reducing greenhouse gas emissions after the Kyoto Protocol expires in 2012.

His broader scholarship encompasses the legal,

(continued on pg. 11)

Opening of the Yang & Yamazaki Environment & Energy Building

In March 2008, Stanford celebrated the opening of the Jerry Yang and Akiko Yamazaki Environment and Energy Building, fondly known as Y2E2. Among ecologist, economists, earth scientists, biologists, engineers, and law and policy analysts, Buzz Thompson, Meg Caldwell, the Woods Institute for the Environment, and the new Center for Ocean Solutions are all housed in Y2E2.

Constructed to high environmental standards, the building showcases sustainable building practices and serves as a living laboratory for the research conducted inside.

In his remarks to the Academic Council in May 2008, Stanford President John Hennessy said, "This facility, the first in the new Science and Engineering Quadrangle, is a home for environmental research at Stanford. It allows us to bring together researchers and faculty from across the university to collaborate on new and different kinds of research on issues ranging from global climate change to access to safe drinking water. Y2E2 reflects the university's strong sustainability guidelines, setting a new standard on campus for both low water and low energy use."

And Jeffrey Koseff, the Perry L. McCarty co-Director of the Woods Institute noted at the building's opening, "Now with the dedication of the Y2E2 building their vision has become very compelling and very real. Not only will Y2E2 become the hub and centerpiece for activities in Sustainable Built Environment but the building itself will be a research tool and a teacher of what is possible and what we need to achieve to become more sustainable."

If work or pleasure find you in Palo Alto, please come visit the ENRLP offices within Y2E2, Room 193. To schedule a visit, please contact Susan Carter.

SUSAN CARTER

susan.carter@stanford.edu
650-721-1488
Y2E2 Room 218B



The Yang & Yamazaki Environment & Energy Building



Meg Caldwell '85, Director of Stanford's ENRLP and Senior Lecturer on Law; Interim Director of Center for Ocean Solutions outside the Center's new offices in Monterey, California

Caldwell Named Interim Director of Ocean Center

Meg Caldwell '85, Director of Stanford's ENRLP and Senior Lecturer on Law; Interim Director of Center for Ocean Solutions

Meg Caldwell '85 was appointed interim director of the new Center for Ocean Solutions (COS), a collaboration between Stanford University, the Monterey Bay Aquarium, and the Monterey Bay Aquarium Research Institute focused on developing practical and enduring solutions to address environmental and economic problems facing the world's oceans. Established in January 2008 with a \$25 million grant from the David and Lucile Packard Foundation, COS is headquartered in Monterey and managed by Stanford's Woods Institute for the Environment. Caldwell praised COS for its "commitment to applying our collective knowledge, experience, and capacity for innovation to addressing the greatest challenges facing our oceans." For more information about the center, go to centerforoceansolutions.org.



Deborah Sivas '87, Professor of Law and Director of Stanford Environmental Law Clinic

Sivas Promoted to Full Professor of Law (Teaching)

Deborah Sivas '87 can now add Professor to her list of distinguished achievements that include leading environmental litigator and director of the highly regarded Stanford Environmental Law Clinic.

Under her leadership, Stanford Law students have successfully challenged the Bush administration's gas mileage standards for SUVs and light trucks, held the U.S. Environmental Protection Agency accountable for regulating the discharge of invasive species in ship

ballast water, protected Joshua Tree National Park from a destructive landfill plan, and helped preserve the Medicine Lake Indian sacred site. Sivas' current research is focused on the interaction of law and science in the arena of climate change and coastal/marine policy and

the ability of the public to hold policy-makers accountable.

In recognition of her work, California Lawyer magazine named Sivas one of its "Attorneys of the Year." The CLAY awards recognize "attorneys across the state whose achievements have made a profound impact on the law." Sivas was cited for her work "convincing the Ninth U.S. Circuit Court of Appeals to reject the federal fuel economy standards for light trucks and sport utility vehicles as incomplete and inadequate"—as co-counsel in *Center for Biological Diversity v. National Highway Traffic Safety Administration*.

DEBORAH SIVAS

dsivas@stanford.edu
650-723-0325
SLS Room B07

Heller's Work Recognized by Nobel Committee

Thomas Heller was recognized as one of the lead contributors to the United Nations' Intergovernmental Panel on Climate Change (IPCC), which shared the 2007 Nobel Peace Prize with former vice president Al Gore.



Thomas Heller, Stanford Professor of Law

Gore and the IPCC were awarded the prize "for efforts to build up and disseminate greater knowledge about man-made climate change and to lay the foundations for the measures that are needed to counteract such change." Heller accepted this position along with Stanford colleagues, Chris Field, Stephen Schneider, Terry Root, Michael Mastrandea, and John Weyant.

"The combination of science and morality the committee's decision reflected was a lovely recognition of the

complex dimensions of getting at this problem," says Heller, the Lewis Talbot and Nadine Hearn Shelton Professor of International Legal Studies, and senior fellow at Stanford's Woods Institute for the Environment and at the Freeman Spogli Institute for International Studies.

Heller balances teaching international environmental and climate change law and policy with traveling extensively on behalf of the IPCC and the United Nations Secretary General, focusing on ways to channel the desires and demands

of entire nations into a path that reduces carbon emissions. He is determined to capitalize on the public attention that Gore and the Nobel Peace Prize have brought to the issues of climate change.

"He's in a position to make a real difference and I think he feels that sense of mission," says Wara.

Adapted from Stanford Lawyer

TOM HELLER

theller@stanford.edu
650-723-7650
SLS Room 329



Buzz Thompson JD/MBA '76 (BA '72), Director of Woods Institute and Stanford Professor of Law

US Supreme Court Appointed Thompson Special Master

The Supreme Court of the United States appointed Professor Barton H. “Buzz” Thompson, Jr., and environmental and water law expert, as Special Master in a water rights conflict between Wyoming and Montana.

The case, *Montana v. Wyoming*, involves a water dispute over the Yellowstone River compact of 1950. Montana claims its upstream neighbor Wyoming is taking more than its fair share of water as spelled out in the compact.

Thompson’s duties as Special Master are similar to that of a lower court judge – including conducting the fact-finding and making recommendations to the justices.

Stanford Law School Professor Pamela Karlan commented on Thompson’s appointment, calling him “smart, fair, and a good listener, so combined with his expertise in property, water law, and natural resources law, he’s a natural for this kind of work.”

BUZZ THOMPSON

buzzt@stanford.edu
650-723-2518
SLS Room 320, Y2E2 Room 225



Susan Carter, Administrative Assistant, ENRLP and Woods Institute

Carter Joins ENRLP Program

Susan Carter has joined the Environmental and Natural Resources Law & Policy Program as assistant to Buzz Thompson and Meg Caldwell.

Susan came to us from the School of Medicine where she supported the Chair of Pediatric Neurology, faculty and staff. She is working toward a B.S. in Marine Biology due to her love of the sea and its many wonderful creatures. “Being a part of the ENRLP Program gives me a chance to make a small difference in improving the quality of our ocean’s

health and future,” she offered.

In addition to keeping Meg and Buzz’s calendars straight and managing their offices at Y2E2, Susan dedicates half of her time to supporting the Woods Institute for the Environment at Stanford. We are absolutely delighted to have Susan on board.



Leah Russin, Stanford Environmental Law Clinical Fellow

Clinical Fellow

Leah Russin

Leah J. Russin joined Debbie Sivas at Stanford Law School’s Environmental Law Clinic as a fellow in 2007. Russin was most recently a litigation associate at Quinn Emanuel Urquhart Oliver & Hedges in Los Angeles, where her pro bono work included assisting environmental groups oppose the extension of a toll road through a state park. Prior to this, she served as a clerk for Chief Judge Paul J. Barbadoro at the United States District Court in New Hampshire. A 2002 graduate of Duke University School of Law, Russin worked as a research assistant to environmental law professors Jonathan B. Wiener and Christopher Schroeder and as research editor for the *Duke Environmental Law and Policy Forum* and the *Alaska Law Review*. Before going to law school, she taught both high school science and math. Leah enriches our clinic with her mastery of civil procedure and her commitment to nurturing the next generation of environmental practitioners. Her fellowship with the Environmental Law Clinic extends through the ‘09 - ‘10 academic year.

LEAH RUSSIN

leahrussin@law.stanford.edu
650-725-4217
SLS Room B06

Center for Ocean Solutions Launched with Caldwell at the Helm

In January 2008, Stanford University, Monterey Bay Aquarium and Monterey Bay Aquarium Research Institute (MBARI) launched the Center for Ocean Solutions to tackle global threats to the oceans.

This new collaboration brings together international experts in the natural, physical, and social sciences to find innovative ways to protect and restore the world's oceans.

"It is with great pleasure that Stanford joins two world-class institutions, the Monterey Bay Aquarium and MBARI, to establish the Center for Ocean Solutions—a unique forum where marine scholars can develop effective solutions to one of the most critical environmental problems of the 21st century," Stanford President John Hennessy said. "Stanford is widely recognized for its broad range of marine scholarship in biology, aquaculture, environmental law and many other fields. But the problems we face—from polluted shorelines to collapsing fisheries—are so complex that they will only be solved by engaging in new collaborations that extend beyond the university."

\$25 Million Packard Foundation Grant Establishes Ocean Solutions

The David and Lucile Packard Foundation provided a \$25 million grant to establish the new center in Monterey, Calif., near the Monterey Bay Aquarium, one of the world's top aquariums, with more than 42 million visitors since 1984; Stanford's Hopkins Marine Station, the oldest marine research lab on the West Coast; and MBARI, a leading independent oceanographic research institution.

Caldwell Named Interim Director

"In the United States, there has been a clear lack of leadership on the part of government to solve the major risks facing our oceans, so there is a real opportunity vacuum that the Center for Ocean Solutions can fill," said Caldwell, former chair of the California Coastal Commission. "One of our aspirations is to be staunchly forward-looking—not only acknowledging immediate threats but being able to look well ahead and say, 'These are issues that are going to confront society in the next generation, which we should be dealing with right now.'"

"The primary mission of the center is to deliver the best science to ocean policy," says interim director Meg Caldwell, JD '85, a senior lecturer who heads the Law School's environmental law program. At a time when both the U.S. Commission on Ocean Policy and the Pew Oceans Commission have issued reports detailing threats to marine environments, Caldwell says the center taps the expertise of oceanographers, marine ecologists, marine biologists, chemists, engineers, social scientists, lawyers and conservation psychologists. They take aim at the complex issues of land-sea interactions, marine and coastal ecosystem health, and climate change issues, among other challenges.

Although based in California, the



Stanford's Marine Hopkins Station



An MBARI-developed device, above, is lowered into the ocean to measure nitrate, a key nutrient for phytoplankton, which form the basis for most ocean food webs.



Visitors enjoy the kelp forest exhibit at the Monterey Bay Aquarium

center confronts problems that affect oceans worldwide.

Collaborative Model

"By combining top science talent with innovative policy ideas, I believe the center has the potential to produce fresh insights and practical solutions to achieve healthy ocean ecosystems for the future," said Julie Packard, executive director of the Monterey Bay Aquarium.

The Center for Ocean Solutions is managed by Stanford's Woods Institute for the

(continued on pg. 6)

Center for Ocean Solutions

(continued from pg. 5)

Environment, which is located on the main university campus about 90 miles north of Monterey. The university also serves as the fiscal sponsor responsible for payroll and hiring.

“The Monterey Bay area has a breadth and depth of marine research that is unparalleled in the United States,”

said Woods Institute co-director Jeffrey Koseff, a professor of civil and environmental engineering at Stanford. “The faculty at Hopkins is among the very best marine biologists in the world. Right next door is the Monterey Bay Aquarium, which has a phenomenal capacity to inspire people and teach them in a very understandable way about the oceans. Just up the coast is MBARI, which is a world leader in deploying technology for oceanic exploration. And on the main Stanford campus there is a thriving community of oceanographers, engineers and legal scholars working on near-coastal ocean and fisheries challenges. Through the Center for Ocean Solutions, we can bring together all of this science, engineering, policy and outreach expertise and apply it to solving these critical environmental problems.”

“Unlike traditional academic partnerships, the center has a results-oriented focus that brings experts and decision makers together to develop new strategies that lead to real change,” said Buzz Thompson, professor of law at Stanford and co-director of the Woods Institute.

COS Pacific Ocean Initiative

The Pacific Ocean covers one-third of the planet and hosts complex ecosystems and marine-based economies, yet this vast region is not being managed sustainably. To address this enormous challenge, the Center for Ocean Solutions has launched the Pacific Ocean Initiative. As part of its Pacific Ocean Initiative, the Center for Ocean Solutions—in collaboration with the International Union for the Conservation of Nature (IUCN) Global Marine Programme—brought together leading scientists from 30+ countries across the Pacific to develop a Scientific Consensus Statement for the Pacific Ocean available online at poi.stanford.edu.

The foundation for the statement is a meta-analysis that synthesizes over 3420 peer-reviewed scientific articles and publications focused on the Pacific Ocean. The meta-analysis describes key threats, impact, research gaps, and trends country-by-country, by region, and pan-pacific. In a two-day workshop, scientists from across the Pacific representing more than 30 countries ground-truthed the literature review, identified impact hotspots, and forged the scientific consensus statement that has already been joined by more than 370 natural, physical, and social scientists around the globe. “This is the first time in history that the scientific community speaks with one voice about the dominant threats facing the Pacific and the communities that depend on it. They are: pollution, overfishing, habitat destruction, and climate change. These same threats impact countries and regions of the Pacific regardless of wealth, population, size, or culture,” said Caldwell.

This October, Caldwell and colleagues from the IUCN, Ocean Conservancy, and the State of California presented the Scientific Consensus Statement to an international audience at the IUCN World Conservation Congress in Barcelona. The Statement is the first step in



Buzz Thompson, Josh Eagle, and Meg Caldwell with National Marine Fisheries Service Regional Administrator, Patricia Kurkul, at the September 2008 Fisheries Forum workshop at Stanford

the Pacific Ocean 2020 Challenge launched by IUCN and officially endorsed by its membership at the 2008 World Conservation Congress in Barcelona. For more information about the Pacific Ocean Initiative and to see the fully searchable online Pacific Ocean Library, go to poi.stanford.edu.

Fisheries Leadership & Sustainability Forum

The Fisheries Leadership & Sustainability Forum—a new partnership of the Center for Ocean Solutions, Stanford’s Woods Institute, Environmental Defense Fund, and Duke University’s Nicholas School of the Environment and Institute for Environmental Policy Solutions—provides leadership training and education to members of the eight U.S. Regional Fisheries Management Councils. Through workshops and ongoing support, the Forum helps participants develop leadership and problem-solving skills and provides important opportunities to share management experiences across regions.

The first Fisheries Forum workshop was held at Stanford on September 21-23 when sixteen Council Members representing seven of the eight U.S. Fisheries Management Councils participated. At the workshop, Council members traded insights and best practices across regions and collectively explored key challenges they face in managing the nation’s fisheries. The next Fisheries Forum workshop will be held May 11-14, 2009 in Beaufort, North

(continued on pg. 16)

Caldwell Testified Before Congressional Subcommittee on Fisheries, Wildlife and Oceans

In November 2007, Meg Caldwell '85 testified before the congressional Subcommittee on Fisheries, Wildlife, and Oceans advocating for improvements to the National Marine Sanctuaries Act (NMSA).

The issue before them was the reauthorization of the National Marine Sanctuary Program.

Caldwell's testimony included these statements:

"In the next thirty years our oceans will face even greater threats than those that spurred the original legislation ...it is unfortunately the case that the marine ecosystem management system in place at the Channel Islands National Marine Sanctuary provides a rare success story for mainland U.S. waters. Many sanctuaries provide minimal protection to the important ecosystems they cover, many of our most valuable marine environments are left unprotected, and several of our coastal states have sanctuaries barely big enough to encompass a shipwreck. Congress now has the opportunity to fulfill the original vision of the NMSA by aligning the actual authority of the National Marine Sanctuaries system with its broad mandate to protect our most valuable ocean ecosystems. With a few targeted changes, the NMSA could make the success embodied in the Channel Islands Sanctuary network of marine protected areas the norm rather than the exception."

Caldwell recommended the following specific changes: clarify resource preservation as the NMSA's primary goal; add an ecological resource classification provision; give NOAA the explicit authority to create fully protected marine reserves; create a method to provide immediate protection to endangered



PHOTO: PAUL WELLMAN/SANTIA BARBARA INDEPENDENT

Meg Caldwell '85 with Bill Douros, Regional Director of NOAA's National Marine Sanctuary Program.

"...the marine ecosystem management system in place at the Channel Islands National Marine Sanctuary provides a rare success story for mainland U.S. waters..."

ecosystems; and end the moratorium on new sanctuaries. Caldwell's full testimony is available online at law.stanford.edu/display/images/dynamic/publications_pdf/NMSA_Testimony.pdf.

Sivas and Caldwell Publish Heralded Article on Ocean Zoning

In January 2008, Deborah A. Sivas and Meg Caldwell published a well-received article in the *Stanford Environmental Law Journal* on ocean zoning called "A New Vision For California Ocean Governance: Comprehensive Ecosystem-Based Marine Zoning." This article served as a basis for the Legal Standards for Marine Ecosystem-Based Management: California and Beyond workshop at Stanford in March 2008, co-hosted by ENRLP and COMPASS, the Communication Partnership for Science and the Sea. The Center for Ocean Solutions' California Marine Spatial Planning project is a natural outgrowth of Sivas' and Caldwell's article and will explore both the ecological and governance principles and mechanisms that could guide ecologically-based marine spatial planning statewide.

Wara and Victor Pioneering Research on Carbon Markets

Michael Wara and David Victor have both contributed to the developing field of carbon markets. Wara has published his research in publications as varied as *Nature*, *Science*, and, with his most recent work, in the *UCLA Law Review* – “Measuring the Clean Development Mechanism’s Performance and Potential.” This last article presents an overview of the development and current shape of the growing carbon credit market, and then examines two important classes of emission reduction projects within the Clean Development Mechanism (CDM) of the Kyoto Protocol – the first global attempt to address a global environmental public goods problem with a market-based mechanism.

The article then argues for the need for reform of the international climate regime in the post-Kyoto era, offering potential options for reforming the CDM and an alternative mechanism for financing emissions reductions in developing countries.

Similarly, Victor’s work has been issued in such wide-ranging publications as *Climatic Change*, *The Financial Times*, *Foreign Affairs*, *International Journal of Hydrogen Energy*, *Nature*, *The New York Times*, *Science*, and *Scientific American*, and *The Washington Post*.

Together, Wara and Victor published a working paper for Stanford’s Program on Energy & Sustainable Development in April 2008. For a full list of publications, see pesd.stanford.edu/publications/listall. Their joint paper, entitled “A Realistic Policy on International Carbon Offsets,” argues that a substantial fraction



(Left) Michael Wara '06, Stanford Assistant Professor of Law; (right) David Victor, Director, Program on Energy and Sustainable Development at CESP; Freeman Spogli Institute for International Studies Senior Fellow; Stanford Professor of Law

...“a substantial fraction of the international carbon market does not actually represent real reductions in emissions.”

of the international carbon market does not actually represent real reductions in emissions. They also argue that these international credits, which are part of the Kyoto Protocol’s “Clean Development Mechanism (CDM),” will not offer companies reliable ways to contain the cost of complying with limits on emissions.

DAVID VICTOR

David.Victor@stanford.edu
650-724-1712
SLS Room 241



David Hayes, Consulting Professor, Stanford University, Woods Institute and Latham & Watkins LLP, Woods Institute Visiting Scholar

The Carbon Workshop, October 2007

In October 2007, the Woods Institute hosted a two-day workshop with environmental researchers and leaders from the private and public sectors to explore the issues related to carbon offsets and a market-based regulatory system.

Led by Woods Consulting Professor David Hayes '78, participants examined a range of issues including: identifying the appropriate balance between requiring primary emissions reductions by regulated entities and allowing such entities to generate credits from carbon offset projects; and establishing a statutory and/or regulatory approach for defining the rules and standards, and the validation and enforcement mechanisms, that should govern the use of carbon offsets as part of a mandatory carbon scheme.

For more information on the results of this workshop, see woods.stanford.edu/ideas/carbon/resources.html for publications.

Caldwell and Sivas on Interdisciplinary Teams Awarded Environmental Venture Project Grants



Meg Caldwell '85 and Deborah Sivas '87

Law School Faculty, Meg Caldwell '85 and Deborah Sivas '87, were awarded Environmental Venture Project grants for interdisciplinary research aimed at finding practical solutions promoting global sustainability, with a focus on ocean and freshwater sustainability. The projects focus on: (1) Chile's aquaculture industry; (2) groundwater discharge of wastewater contaminants at the California land-sea interface; (3) sustainable coastal tourism in Costa Rica; and (4) restoration of Monterey Bay's largest

estuary, Elkhorn Slough.

The teams include several faculty members representing a broad cross-section of disciplines at Stanford—including history, biology, anthropology, business, engineering and law.

"Having served on the selection committee for three years, I'd say this was the strongest applicant pool yet," said David Kennedy, the Donald J. McLachlan Professor of History. "I was especially gratified to see some compelling projects that have not only excellent science but also robust social science and public policy components—something we have been trying to encourage."

The Woods Institute's Environmental Venture Projects (EVP) program provides seed funding to interdisciplinary teams of Stanford faculty for research that results in realistic solutions to major environmental challenges.

Caldwell on Team that Won Planning Grant for the Sustainable Built Environment

Caldwell '85 will participate on an interdisciplinary team devoted to studying climate change and its impact on the built environment in the coastal zone as part of Stanford's research on Sustainable Built Environment (SBE), an emerging field that promotes the sustainable development of buildings, infrastructure, and urban areas.

"Because the built environment has such a big impact on the natural environment, a consensus emerged across campus that SBE should be a core area of research at Stanford," said Ray Levitt, a professor of civil and environmental engineering and a senior fellow at the Woods Institute.



Buzz Thompson JD/MBA '76 (BA '72), Director of Woods Institute and Stanford Professor of Law

Thompson Steers Interdisciplinary Freshwater Research With Planning Grants Awards

Buzz Thompson JD/MBA '76 (BA '72) was awarded planning grants to develop long-term research to help solve the world's urgent demands for freshwater. Thompson is involved as the principal investigator or participant in the four following research projects: (1) global change and water resource vulnerability; (2) water in the West: a regional approach; (3) aquifer depletion and salinization; and (4) an integrated model of the California water system.

Environmental Law Workshop 2008: Water Law & Policy

OVERVIEW OF WATER RIGHTS, WATER QUALITY, AND RELATED POLICIES IN CALIFORNIA AND OTHER WESTERN STATES

Richard Roos-Collins
Director of Legal Services, Natural Heritage Institute

LIQUID GOLD: SOLVING THE WORLD'S FRESHWATER SUSTAINABILITY CHALLENGES

Buzz Thompson
Stanford Law School

THE WORLD'S WATER

Peter Gleick
Co-founder and President, Pacific Institute for Studies in Development, Environment, and Security

GLOBAL WARMING AND OTHER DEVELOPMENTS IN THE REGULATION OF WATER RIGHTS

Art Baggett
Member, State of California Water Resources Control Board

THE PAST AND FUTURE OF WATER SUPPLY AND QUALITY REGULATION IN THE SAN FRANCISCO BAY DELTA

Joe Grindstaff
Deputy Secretary for Water Policy, California Resources Agency

THE FUTURE OF ENVIRONMENTAL PROTECTION FOR AQUATIC ECOSYSTEMS

Brian Gray
UC Hastings College of Law

INTERNATIONAL WATER

Jenna Davis
Stanford Civil & Environmental Engineering
Scott Fendorf
Stanford Soil & Biogeochemistry

Scott Rozelle
Freeman Spogli Institute for International Studies Program on Food Security & Environment

Buzz Thompson (moderator)
Stanford Law School

WATER SUPPLY RELIABILITY IN A WORLD OF SHORTAGES

Tim Quinn
Executive Director, Association of California Water Agencies

APPLYING SCIENCE TO LAW IN COMPLEX AQUATIC ECOSYSTEMS

Jay Lund
Center for Watershed Sciences, UC Davis

WATER IN THE WEST

David Freyberg
Stanford Civil and Environmental Engineering

David Kennedy
Stanford History
Roger Knoll
Stanford Economics

Jeff Mount
Center for Watershed Science, UC Santa Cruz

Jeff Koseff (moderator)
Stanford Civil & Environmental Engineering

Panel on Protecting High-Risk Communities in the Face of Global Climate Change

In October 2008, the Stanford Environmental Law Society co-sponsored a panel that examined the adverse affects of global climate change on communities in high risk areas due to anticipated changes to Arctic land masses and decreasing overall water availability over the next century. Panelists explored global warming's projected impact on vulnerable coastal communities and communities indigenous to cold-weather climates. Climate change experts and activists discussed the

implications of different response strategies on the local and national level.

The panel was moderated by John Lyons '87, lecturer at Stanford Law School and EPA attorney. Panelists included: Luke Cole, Director of Center on Race, Poverty and the Environment; Sarah Burt, an Earthjustice attorney; Sarah Strauss, Associate Professor of Anthropology at University of Wyoming; and Susie Crate, George Mason University.



Buzz Thompson conferring with Meg Caldwell at the Pacific Salmon Workshop

The Pacific Salmon Workshop

November 15-16, 2007

In November 2007, the Woods Institute hosted a two day workshop to explore opportunities to improve the Pacific Salmon Treaty (PST) and examine sustainable business practices for Pacific salmon stock. The workshop brought together key members of the Canadian and United States governments, as well as leaders in the conservation, corporate, indigenous, and academic communities.

The group discussed key topics, such as managing for diversity, scientific uncertainty and the precautionary principle, governance and avenues to sustainability. These discussions resulted in innovative and valuable ideas that were infused into the 2008 renegotiation process and can ultimately improve the long-term sustainability of Pacific salmon.

Buzz Thompson JD/MBA '76 (BA '72), Meg Caldwell '85, and Kaush Arha '05, Department of the Interior, moderated several panels.

Intergovernmental Regulatory Takings Forum at Stanford

November 5, 2008

On November 5, 2008, the Intergovernmental Takings Forum met for a roundtable session for federal and state attorneys to exchange questions and insights on regulatory takings issue that they are involved in. The Intergovernmental Takings Forum was formed with the goal of fostering discussion and cooperation between federal agencies and states on Fifth Amendment takings issues. In past years, numerous federal and state attorneys have participated in a spirited, substantive, and non-partisan, program addressing a variety of cutting-edge regulatory takings issues.

Environmental Law Workshop 2009: Clean Technology

This annual seminar brings together academics, policy makers, and business leaders to discuss their current research and work. This year, the Workshop, to be held from January to March 2009, will be co-taught by Meg Caldwell and Buzz Thompson and will focus on clean technology. We encourage interested members of the Stanford community and friends of the Environmental Law Program to attend workshop sessions that interest them. To stay informed, join the Environmental Workshop listserve by contacting Susan Carter at susan.carter@stanford.edu.

Wara Joins Faculty

(continued from pg. 1)

financial, and technological constraints on the production of energy.

“Michael is a pioneer in the next generation of legal academics working on the environment—scholars who can think about and approach issues of

Taking Litigation Conference, Stanford Law School

November 6-7, 2008

On November 6-7, 2008, Stanford Law School hosted the 11th Annual CLE Conference on Litigating Takings and Other Legal Challenges to Land Use and Environmental Regulation. Stanford's co-hosts were Georgetown Environmental Law & Policy Institute, Georgetown University Law Center.

This conference examined how the Takings Clause and related legal doctrines may undermine the public's ability to address emerging environmental, public health, and growth management challenges.

A particular focus of this year's conference was the potential takings implications of public policy initiatives designed to mitigate and adapt to global warming.

The conference also addressed recent legal developments in takings law and related fields, including the latest legal and policy fallout from the Supreme Court's landmark decisions in *Lingle v. Chevron USA* and *Kelo v. City of New London*. Another featured topic was future prospects for property rights ballot measures along the lines of Propositions 98 and 99 in California and other states.

Conference faculty included a mix of leading academic scholars and expert practitioners. The proceedings of the conference will be published in the *Stanford Environmental Law Journal*. For more information, go to naturalresourceslaw.stanford.edu.

environmental law and policy with a deep understanding of the underlying science and technology,” said Larry Kramer, Richard E. Lang Professor of Law and Dean. “There is no more important work to be done, and Michael is on the cutting edge.”

Wara's most recent research sheds light on the Kyoto Protocol Clean Develop-

ment Mechanism (CDM), a carbon trading market that works by paying developing countries to adopt lower-polluting technologies. Wara's findings, published in *Nature* in February 2007 and the subject of a follow-up working paper with co-researcher Professor of Law David Victor, suggest that CDM is not an effective incentive for reducing emissions.

Wara, who is also a fellow at the Program on Energy and Sustainable Development at Stanford's Freeman Spogli Institute for International Studies (FSI), draws on an extensive background in oceanography, geochemistry, and climate science. He holds a doctorate in ocean sciences from UC Santa Cruz (2003) and has published work in *Science* on the history of the El Niño/La Niña system and its response to changing climates.

“This is a defining moment in environmental law, and I cannot think of a better place to be teaching and conducting research than at Stanford Law,” said Wara, who is teaching Environmental Law and Policy this winter. “In addition to being a world-class arena for interdisciplinary research, the law school is at the forefront of using rigorous empirical approaches to understanding the real-world impact of environmental law and policy.”

Wara joined Stanford in 2007 as a research fellow and lecturer in law and as a FSI research fellow. Previously, Wara was an associate in Holland & Knight's Government Practice Group, where his practice focused on climate change, land use, and environmental law. In addition to a PhD in ocean sciences, he holds a BA from Columbia University (1996) and a JD from Stanford Law School (2006).

MICHAEL WARA

michael.wara@stanford.edu
650-723-5310
SLS Room 319

Clinic Wins Ruling That Bush Administration Ignored Global Warming in Setting National Gas Mileage Standards

The Clinic, on behalf of the Center for Biological Diversity (CBD), was victorious in the Ninth Circuit Court of Appeals in an expedited lawsuit challenging the new corporate fuel economy standards for light trucks (pickups, SUVs, and minivans).

The National Highway Traffic Safety Administration promulgated the new standards in 2006 for light trucks manufactured from 2008-2011, touting them as a major benefit to the environment. The CBD argued that, under the rule, average mileage for these vehicles, which now make up half of all new vehicles sales in the US, would rise over the next four years by less than 1.5 mpg (from 22.2 to 23.5 mpg) and would remain far behind fuel efficiencies in most other countries. Moreover the CBD argued that the way the rule is drafted, there is no guarantee that even these minimal expected increases would occur.

On behalf of the CBD, the clinic argued that the rulemaking was arbitrary and capricious because NHTSA failed to take account of the global warming impacts from the new standards, failed to consider a reasonable range of alternative standards, and failed to calculate the benefits of reduced greenhouse gas emissions from higher standards (i.e., NHTSA justified the rule based on a cost-benefit analysis that valued the reduction of greenhouse gas emissions from higher standards at zero), among

other things. Eleven states, the District of Columbia, the City of New York, and four other national environmental groups joined in the CBD lawsuit.

In a 90-page opinion, the Ninth Circuit found in CBD's favor on virtually all of the points that the clinic advanced and remanded the rulemaking with direction to prepare a full Environmental Impact Statement and promulgate new standards "as expeditiously as possible and for the earliest model year practicable."

The ruling, written by Senior Circuit Judge Fletcher, found against the administration's decision to exempt SUVs and light trucks from fuel economy standards. "That class 2b trucks [light trucks] have never been regulated by NHTSA is not a reason for not regulating them now. We remand to NHTSA to revisit this issue and promulgate average fuel economy standards for these vehicles or to provide a validly reasoned basis for continuing to exclude them from the regulation."

"This ruling holds the administration accountable for its refusal to accept the realities of global warming and forcing them to start taking responsible actions



Noah Long '08 and Ben Ratner '08

to implement the obvious solutions," said Kassie Siegel, climate program director for the Center for Biological Diversity.

“Raising fuel economy standards is one of the most effective actions the government can take to quickly and significantly reduce greenhouse gas pollution...”

Kassie Siegel noted, “and there is no reason SUVs and light trucks should be exempt from these standards,”

Clinic students Noah Long '08 and Ben Ratner '08 wrestled with the large rulemaking docket and worked tirelessly on both the opening and reply briefs over two semesters under the supervision of clinic director Debbie Sivas, clinical fellow Leah Russin and Legal Assistant Lynda Johnston.

“This is an important victory in the fight against global warming,” said Sivas. “It’s hard to imagine a federal action more significant to the problem of climate change than one which dictates fuel consumption standards.”

Clinic's Amicus Brief on Behalf of Senator Kerry and U.S. Representative Inslee Elevates Climate Change Science

Stanford's Environmental Law Clinic recently struck a blow for public disclosure and open government, also in the climate change arena. Passed in 1990, the Global Change Research Act is intended to provide Congress and the public with the relevant scientific information necessary to legislate and develop policy in the area of global change, particularly global warming. The statute requires certain executive branch agencies to prepare a research plan every three years for the nation's climate change research agenda and to prepare a national scientific assessment summarizing the current state of our collective knowledge at least once every four years. The scientific information synthesized and assessed in these documents is then available to Congress, administrative agencies, and the public.

The last national assessment was completed by the Clinton administration in 2000 and the last research plan is severely outdated.

The Clinic filed an amicus curiae brief on behalf of Senator John Kerry and U.S.

Representative Jay Inslee arguing that because the current administration has refused over the past seven years to update the research plan or prepare a new national scientific assessment, the courts should force compliance with the statute. The amicus brief focused on the administration's suppression of climate change science, including a detailed declaration by an agency whistleblower.

In granting summary judgment to the plaintiffs in August 2007 and ordering the government to prepare and issue the missing documents early next year, the district court specifically noted that it had read and considered the Clinic's amicus brief – and indeed, the court borrowed some of the case analysis and language from the brief.

Clinic students Craig Segall '07, Sam Woodworth '08, and Edwin Dietrich '08, and Clinic Director Deborah Sivas gathered a massive amount of relevant scientific and policy information, located the whistleblower declarant and drafted the briefs.



Craig Segall '07



Sam Woodworth '08



Edwin Dietrich '08

Clinic Challenges Once-Through Cooling System at Moss Landing

In September 2007, Clinic Student, Edwin Dietrich '08, argued before the 6th District Court of Appeal to revoke Duke Energy's state permit to operate a "once-through" cooling system that sucks in 1.2 billion gallons of water daily from Elkhorn Slough, which is one of the largest intact coastal wetlands in California, then discharge that water into the sea. Stanford's Environmental Law Clinic, representing Voices of the Wetlands, argued that the cooling system violates the Clean Water Act's requirement that power plants use the "best technology available" to minimize environmental impact to marine organisms, like a "closed-cycle" cooling system in which the same water is recycled through the plant for cooling.

In March 2008, the Sixth District Court of Appeal upheld the water discharge permits for Duke Energy's Moss Landing power plant. The Voices of the Wetlands has asked the state Supreme Court to review the Sixth District's decision.



(Left) Selena Kyle '05, right, with from left, Michael Pappas '07, Peter Morgan '06; (right) Brian Shillinglaw, JD/MS, Interdisciplinary Program in Environment and Resources (IPER) '08

Selena Kyle '05, formerly was a Charles Koob Environmental Litigation Fellow at NRDC, was promoted to a general litigation attorney. As a member of the litigation team in NRDC's San Francisco office, Kyle handles the complex litigation across NRDC's program areas. Her caseload includes litigating an oil pipeline that brings oil from Canada to the US; overfishing off the coast of California; and an environmental justice case about a landfill in Tennessee.

Brian Shillinglaw, JD/MS, Interdisciplinary Program in Environment and Resources (IPER) '08 has won Stanford Law School's prestigious Olaus and Adolf Murie Award in Environmental Law for best environmental writing by a third year law student. Brian's research and writing focused on financing community-based conservation of working landscapes. While completing his interdisci-

plinary masters degree and JD at Stanford, Brian conceived and organized a highly successful two-day workshop exploring options for financing community-based conservation of working lands. Participants included leading community conservation advocates, land trust professionals, finance professionals, and academics with expertise in community-based natural resource management. The workshop focused on financial topics related to municipalities and local non-profit or for-profit corporations acquiring forests, rangeland, and irrigation systems for conservation and continued production.

Brian now works as Manager of Policy & Regulatory Affairs at New Forests Inc. where he oversees New Forests' policy analysis and regulatory affairs related to land-based investment, carbon trading and forestry management.



Deborah Sivas '87

Surge in Environmental Law Opportunities and SLS Student Interest

Professor of Law and Director of the Environmental Law Clinic Deborah A. Sivas was quoted in *The Recorder*

(February 25, 2008) about the uptick in job opportunities within environmental law:

"...In California, job prospects are likely to sprout from the ongoing legal battle with the Environmental Protection Agency over vehicle emissions standards, as well as the implementation of Assembly Bill 32, known as the Global Warming Solutions Act of 2006.

"A whole host of things will come out under AB 32, and some industries will be quite unhappy about them," said Sivas.

Sivas noted that some of the most interesting work will be crafting government policy, particularly at the Air Resources Board, which she said was looking to hire roughly 100 new employees.

Sivas pointed to the last five years as a "huge explosion" in the environmental law field, reflected in the student body with 15 to 20 Stanford Law School students committed to practicing environmental law out of each class of 170 law students.

Kudos for SLS Case Studies Collection

Professor Michael Robinson-Dorn, an Assistant Professor of Law and Director of the Berman Environmental Law Clinic at the UW School of Law, wrote the following recommendation for using the Stanford Law School Case Studies Collection as part of an environmental course curriculum:

"In environmental law, we are fortunate to already have a great start on case study materials and simulations. The Stanford Law School Case Studies Collection provides an impressive start for anyone interested in using case studies and interactive simulations 'that place students in the roles of lawyers and policy makers and teach fundamental lawyering skills such as investigating facts, counseling, and resolving ethical dilemmas.' These simulations are already vetted, packaged and ready to use for anyone interested, and they are also easily embellished, edited, and modified to a professor's liking. I have used several of Stanford's case studies and simulations with good student response and much better student engagement and results than other more traditional materials."

To access the Case Studies Collection, go to law.stanford.edu/publications/casestudies/. For practical information about how to integrate case studies into teaching, contact Alicia Thesing '00 at athesing@stanford.edu.



Stanford Law School ENRLP Case Writer Alicia Thesing '00 works with Stanford Law faculty to update and develop new case studies for use in environmental law, science, policy, ethics and management courses.

ALICIA THESING

athesing@stanford.edu
650-724-9729
Y2E2 Room 193

Meg Caldwell

Recent Publications

- Deborah A. Sivas and Margaret R. Caldwell, A New Vision for California Ocean Governance: Comprehensive Ecosystem-Based Marine Zoning, 27 Stanford Environmental Law Journal 209 (January 2008).
- Reauthorization of the National Marine Sanctuaries Act: Hearing before the Subcommittee on Fisheries, Wildlife and Oceans of the House Committee on Natural Resources, 110th Congress (November 3, 2007) (statement of Meg Caldwell, Senior Lecturer in Law at Stanford Law School, Member of the California Marine Life Protection Act Initiative Blue Ribbon Task Force).

Affiliations

- Faculty Advisor, Interdisciplinary Program in Environment Resources (IPER)
- Faculty Mentor, Haas Center for Public Service Fellowships Program and Member, Haas Center for Public Service Fellowships Program Fellowship Selection Committee
- Member, Jasper Ridge Biological Preserve Advisory Committee
- Member, Monterey Bay Aquarium Board of Trustees
- Member, California Marine Life Protection Act Blue Ribbon Task Force
- Member, Surfrider Foundation, Board of Directors
- Senior Lecturer, Woods Institute for the Environment, Stanford University

Thomas C. Heller

Recent Publications

- Thomas C. Heller, Diversifier la Production Electrique en Chine, in Regards Sur la Terre 2007, Pierre Jacquet and Laurence Tubiana, eds., Paris: Les Presses Sciences Po, 2007.
- David Victor and Thomas C. Heller, eds., The Political Economy of Power Sector Reform: The Experiences of Five Major Developing Countries, New York: Cambridge University Press, 2007.
- Thomas C. Heller, African Transitions and the Resource Curse: An Alternative Perspective, 26 Economic Affairs 24 (2006).
- Thomas C. Heller, Diversifying Power Generation in China, in Bringing Developing Countries into the Energy Equation, Michel Colombier and Jacques Loup, eds., Paris: Institut du Developpement Durable et des Relations Internationales, 2006.

- Thomas C. Heller, C. Zhang, P.R. Shukla, David Victor, D. Biswas and T. Nag, Baselines for Carbon Emissions in the Indian and Chinese Power Sectors: Implications for International Carbon Trading, 34 Energy Policy 1900 (2006).
- David Victor and Thomas C. Heller, Reforming Electric Power Markets in Developing Countries: Politics, Law and Institutions, Cambridge University Press, forthcoming.

Affiliations & Awards

- Member, Center for Development, Democracy, and the Rule of Law
- Member, Program in Energy and Sustainable Development
- Member, Advisory Board, Revenue Watch Institute (Open Society Institute)
- 2007 Nobel Peace Prize as part of United Nations' Intergovernmental Panel on Climate Change (shared with Al Gore)

Robert L. Rabin

Recent Publications

- Robert L. Rabin, Dissembling and Disclosing: Physician Responsibility on the Frontiers of Tort Law (Symposium: Challenges to the Attorney-Client Relationship: Threats to Sound Advice?) 57 DePaul Law Review (2008).
- Robert L. Rabin, Poking Holes in the Fabric of Tort: A Comment (Response to Article by Catherine M. Sharkey and John Fabian Witt), 56 DePaul Law Review 293 (Winter 2007).
- Robert L. Rabin, Smoke Gets in Your Eyes (Book Review: Allan M. Brandt, The Cigarette Century: The Rise, Fall and Deadly Persistence of the Product that Defined America, Basic Books, 2007), American Scientist, September/October 2007.
- Robert L. Rabin and Stephen D. Sugarman, The Case for Specially Compensating the Victims of Terrorist Acts: An Assessment, 35 Hofstra Law Review 901 (Spring 2007).
- Robert L. Rabin, Controlling the Retail Sales Environment, in Ending the Tobacco Problem: A Blueprint for the Nation, Appendix L, Institute of Medicine, 2007.
- Robert L. Rabin, Respecting Boundaries and the Economic Loss Rule in Tort, 48 Arizona Law Review 857 (2006).

- Robert L. Rabin and S. Bratis, Financial Compensation for Victims of Catastrophes: United States, in Financial Compensation for Victims of Catastrophes: A Comparative Legal Approach, Michael Faure and Tom Hartliel, eds., New York: Springer, 2006.

Affiliations

- Member, Editorial Board, Foundation Press
- Member, Editorial Board, Tort Law Review
- Member, Advisory Committee, Restatement of the Law, Third, Torts: General Principles
- Member, Advisory Board, Journal of Tort Law, Berkeley Electronic Press

Deborah A. Sivas

Recent Publications

- Deborah A. Sivas and Margaret R. Caldwell, A New Vision for California Ocean Governance: Comprehensive Ecosystem-Based Marine Zoning, 27 Stanford Environmental Law Journal 209 (January 2008).

Affiliations & Awards

- President, American Environmental Safety Institute
- Legal Chair, Board of Directors, Turtle Island Restoration Network
- 2008 California Lawyer's Attorney of the Year

Buzz Thompson

Recent Publications

- Jeff Koseff and Buzz Thompson, Transforming Ivory Towers to Eco-versities, Stanford Report, August 22, 2007.

Affiliations

- Chair, Science Advisory Board Committee on Valuation of Ecological Systems and Services, U.S. Environmental Protection Agency
- Chair, Board of Directors, Natural Heritage Institute
- Co-Director, Woods Institute for the Environment, Stanford University
- Senior Fellow (by courtesy), Freeman-Spogli Institute for International Studies, Stanford University
- Member, Science Advisory Board, U.S. Environmental Protection Agency
- Member, Board of Trustees, California Chapter, The Nature Conservancy of California
- Member, Board of Directors, Resources Legacy Fund
- Member, Board of Directors, Resources Legacy Fund Foundation
- Member, Board of Directors, American Farmland Trust

David G. Victor

Recent Publications

- David G. Victor and Sarah Eskreis-Winkler, In the Tank: Making the Most of Strategic Oil Reserves, 87 Foreign Affairs 70 (July/August 2008).
- Michael Wara and David G. Victor, A Realistic Policy on International Carbon Offsets, Program on Energy and Sustainable Development Working Paper, No. 74 (April 2008).
- David Victor and Thomas C. Heller, eds., The Political Economy of Power Sector Reform: The Experiences of Five Major Developing Countries, New York: Cambridge University Press, 2007.
- David G. Victor, Fragmented Carbon Markets and Reluctant Nations: Implications for the Design of Effective Architectures, in Architectures for Agreement: Addressing Global Climate Change in the Post-Kyoto World, Joseph E. Aldy and Robert N. Stavins, eds., New York: Cambridge University Press, September 2007.

Affiliations

- Senior Fellow, Council on Foreign Relations
- Program on Energy and Sustainable Development Director,
- Center for Environmental Science and Policy

Michael Wara

Recent Publications

- Michael Wara, Measuring the Clean Development Mechanism's Performance and Potential, UCLA Law Review, Vol. 55 no. 6 (August 2008)
- Michael Wara and David G. Victor, A Realistic Policy on International Carbon Offsets, Program on Energy and Sustainable Development Working Paper, No. 74 (April 2008).
- Michael Wara, Is the Global Carbon Market Working? Nature, February 2007, pg. 595.

Affiliations

- Program on Energy and Sustainable Development

Director's Note

(continued from pg. 1)

Inside this newsletter, you will also read about the opening of "Y2E2" where you can find Buzz and my new offices; several new ocean initiatives; and faculty research and workshops exploring and developing policy on carbon markets, fisheries, and climate change adaptation. Other news includes updates on our faculty's active engagement in several interdisciplinary projects, our curriculum, clinic victories, and alumni spotlights.

We welcome your involvement and hope that when you are in the area, you will stop in to learn more about our work, visit our new offices, and share your insights on how we can make this great program even better.

Meg Caldwell

Director of the Environmental & Natural Resources Law & Policy Program

MEG CALDWELL

megc@law.stanford.edu
650-723-4057
SLS Room 243, Y2E2 Room 193B



Matt Armsby '08, Graduate Fellow at Center for Ocean Solutions

Center for Ocean Solutions

(continued from pg. 6)

Carolina. For more information about the Fisheries Leadership and Sustainability Forum, go to fisheriesforum.org.

Armsby Joins COS

The Center for Ocean Solutions sponsors fellowships for postdoctoral scholars and recent law and business school graduates. Matt Armsby '08 is the inaugural Center for Ocean Solutions Graduate Fellow where he is researching marine spatial management for California with a research team headed up by Hopkins Marine Station Professor of Biology, Fiorenza Micheli. For more information about the center's Early Career Fellowship Program, go to centerforoceansolutions.org/earlycareerfellowship.

MATT ARMSBY

armsbym1@stanford.edu
650-721-1560
Y2E2 Room 193