

# Climate Change, Sustainable Development, and Ecosystems Committee Newsletter

Vol. 11, No. 3

August 2008

---

## MESSAGE FROM THE CHAIRS

**Joe Siegel**  
**William Blackburn**

This is our last newsletter of the 2007-2008 ABA year, so it is fitting that we have six articles touching upon all three of our committee's areas of focus: climate change, ecosystems, and sustainable development.

The first article, by Ira Feldman and Sarah Jensen, addresses legislative action on the important issue of climate change adaptation. The authors describe the major bills now before Congress that would minimize the vulnerability of humans and the environment to the impacts of climate change. The next three articles look at state-specific measures on climate change. Ross Macfarlane discusses the clean energy initiatives in Washington state as well as how climate policy is integrated into state and local planning there. Angela Morrison Uhland and Paula Cobb review Florida's Climate Action Plan. Lindsay Wiles and Tom Cors review North Carolina's plans for adaptation in the face of sea level rise from climate change. The relationship between property rights systems and ecosystem management is examined by Chad McGuire. In the last article, Dan Worth tells us how law students and law schools are impacting climate change law and policy.

We hope you find this final issue of our newsletter helpful and interesting. If you would like to get involved in our committees' work on these topics for next year, please contact us. We welcome your participation.

Finally, we would like to thank Seema Kakade, who along with her co-vice chair, Gabe Calvo, have shouldered the responsibility for publishing our newsletters over the past year. Seema will be stepping down this year, after two very productive years as a newsletter vice chair for our committee, leaving Gabe to continue this valuable work. We thank both of them for their terrific contribution and wish Seema the very best in her future endeavors.

---

## LAST TO THE PARTY: THE HILL TAKES UP CLIMATE CHANGE ADAPTATION

**Ira Feldman**  
**Sarah Jensen**

Recent activity on the Hill demonstrates acceptance that the United States will need to invest in measures to adapt to impacts of global climate change—the adjustment of ecological, social, or economic systems to the adverse impacts of the rise in global temperatures. Scientists and advocates have long forecast the need for society to prepare for climate change-related impacts, but many policymakers have resisted consideration of adaptation policies because of the perception that such approaches would imply acquiescence to the inevitability of climate change or some kind of surrender in the battle against greenhouse gas (GHG) emissions. Fifteen years ago, none other than Al Gore scoffed that adaptation indicated a “kind of laziness, an arrogant faith in our ability to react in time to save our skins.”

**Climate Change, Sustainable Development, and Ecosystems Committee Newsletter**  
**Vol. 11, No. 3, August 2008**  
*Gabriel Calvo and Seema Kakade, Newsletter Vice Chairs*

***In this issue:***

Message from the Chairs  
*Joe Siegel and William Blackburn*..... 1

Last to the Party: The Hill Takes Up Climate Change Adaptation  
*Ira Feldman and Sarah Jensen* ..... 1

Climate Change and Sustainable Development: The Washington State Example  
*Ross A. Macfarlane* ..... 8

Florida's Climate Action Plan  
*Andrea Morrison Uhland and Paula L. Cobb* ..... 12

Sea Level Rise Adaptation in North Carolina  
*Lindsay Wilkes and Tom Cors* ..... 16

Ecosystem-Based Management and Traditional Property Rights: Some Legal and Policy Issues for Consideration  
*Chad J. McGuire* ..... 18

What Tomorrow's Leaders Are Up To Today: A Snapshot of Law Students Driving Climate and Sustainability Solutions  
*Dan Worth*..... 21

© Copyright 2008. American Bar Association. All rights reserved. The views expressed herein have not been approved by the ABA House of Delegates or the Board of Governors and, accordingly should not be construed as representing the policy of the ABA.

This newsletter is a publication of the ABA Section of Environment, Energy, and Resources, and reports on the activities of the committee. All persons interested in joining the Section or one of its committees should contact the Section of Environment, Energy, and Resources, American Bar Association, 321 N. Clark St., Chicago, IL 60654.



Time has passed without significant legislative action of any kind relating to climate change at the federal level. While GHG mitigation-oriented bills are finally receiving serious attention, it is just as important to note that the concept of adaptation has been rehabilitated. No longer stigmatized as capitulation, planning for adaptation is increasingly recognized as an essential tool to minimize vulnerability and increase resiliency. The U.S. Congress is a relative latecomer to the adaptation dialogue—so much so that most U.S. policy advancement of adaptation has occurred at the state and municipal level and work on adaptation in the international arena has far outstripped U.S. federal efforts to consider adopting adaptation policies.

**Why Adaptation?**

Although the overwhelming focus on GHG mitigation continues to overshadow the adaptation half of the climate change equation, the reality is that, even if the most optimistic mitigation plans are adopted and all GHGs are stabilized immediately, residual GHG concentrations within the atmosphere will continue to create adverse consequences well into the future. Mitigation of human-induced GHGs cannot halt or avoid all impacts. The current knowledge of climate change-associated impacts has led the global community to the conclusion that “adaptation will be necessary to address impacts from the warming which is already unavoidable due to past emissions.” *See generally, Ira Feldman and Joshua Kahan, Preparing for the Day After Tomorrow: Frameworks for Climate Change Adaptation*, 8 SUSTAINABLE DEV. L. & POL’Y 61 (Fall 2007).

The Intergovernmental Panel on Climate Change (IPCC) acknowledged in November 2007 in its Fourth Assessment Report that mitigation of climate change through reduction in GHGs should be undertaken in conjunction with adaptation to reduce vulnerabilities. Fourth Assessment Report: Working Group II: Impacts, Adaptation and Vulnerability (2007) Chaps. 17-18. The following month, at climate talks in Bali, Indonesia, the United Nations Framework Convention on Climate Change (UNFCCC) designated a new working group to address the goals of the Kyoto Protocol, listing among its responsibilities

specific, aggressive goals to evaluate and implement adaptation strategies, especially for the most vulnerable nations.

### **Next Steps in the U.S. Congress**

In 2008 we have seen the repeated appearance of adaptation in legislation and U.S.- sponsored conferences with far greater frequency and intensity. Most recently, the first Congressional hearing exclusively on the topic of adaptation took place in late June 2008. It appears that the momentum of consideration of adaptation measures has filtered from the international forum into the U.S. Congress. Perhaps not coincidentally, the U.S. Congress has begun seriously to consider legislation incorporating adaptation strategies just as the UNFCCC working group convened in Bonn, Germany, to discuss financial and technological ways to advance adaptation to ensure that it becomes a part of the next major international climate agreement, scheduled to conclude in Copenhagen in 2009.

Several recent bills in Congress address climate change mitigation and also include significant sections on developing a federal policy on adaptation. Some legislation, such as the Climate Change Drinking Water Adaptation Research Act and the Coastal State Climate Change Planning Act of 2008, are sector- or system-specific; others reach wide and far to envelop every arm of the federal government and offer incentives to bring state and local governments into the process (e.g., the Climate Change Adaptation Act, Lieberman-Warner, or the Investing in Climate Action and Protection Act). If a federal climate bill is passed in the next year or the next administration, it is clear that adaptation will figure prominently. The following section reviews the range of climate change adaptation provisions currently under consideration.

### **Lieberman-Warner Climate Security Act of 2007 (S. 3036)**

The most notable climate change measure in the U.S. Congress thus far is the “Lieberman-Warner Bill,” which sets out an intricate carbon dioxide mitigation program through a cap and trade system. Lieberman-

Warner Climate Security Act of 2008, S. 3036, 110th Congress, Second Session (2008), available at [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110\\_cong\\_bills&docid=f:s3036pcs.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:s3036pcs.txt.pdf). The bill, championed by Senators Barbara Boxer (D-CA), Joseph Lieberman (I-CT), and John Warner (R-VA), garnered a great deal of political and media attention because it is the first bill directly addressing climate change mitigation to reach a floor debate in the full Senate. The bill was heavily criticized for its potential to increase energy costs, and ultimately it was sidelined by its opponents. However, the less controversial provisions might actually be the most significant: the Lieberman-Warner Bill features adaptation provisions of unprecedented scope in national legislation. Those provisions allocates funds to states and federal agencies for adaptation purposes, and not a single opponent questioned the use of funds for these purposes.

Although the Lieberman-Warner measure directly addresses adaptation as an essential element of a national climate change policy, the bill’s adaptation component is limited in that it does not reach specifics of social and economic adjustments to projected climate variation, as a comprehensive adaptation strategy would require. Instead it directs the establishment of an Adaptation Fund “to assist fish and wildlife, habitat, plants, and ecological processes in becoming more resilient to . . . the impacts of climate change.” Similarly, the Lieberman-Warner bill directs the president to establish a National Adaptation Strategy that addresses ecological values such as species, habitat, ecosystems, and ecological processes. The bill presumably leaves the economic and social adaptation strategies to the ingenuity of the states, which are directed to devise “comprehensive adaptation strategies” that are subject to federal approval. Even here, however, the bill enumerates only ecological values to be included in state plans: fish, wildlife, and plant populations, habitats, and “associated ecological processes.”

Oddly, when Lieberman-Warner explicitly considers adverse sociocultural and economic consequences to climate variation, it is in consideration of adaptation strategies in a proposed “International Climate Change

Adaptation and National Security Program.” Only in the international context do findings emerge that list a scarcity of food and water, affected economic livelihoods, and a rise in likelihood of regional instability. It is in light of the consequent national security risk to the United States that the bill proposes U.S. deployment of adaptation technology to least developed nations to help them cope with the effects of climate change on people. Thus, domestic economic and social adaptation appears nearly to have escaped attention in the Lieberman-Warner bill.

That said, the bill’s authors did include a requirement that the administrator of the Environmental Protection Agency develop a National Adaptation Plan (different from the National Adaptation Strategy) based on assessments performed by the IPCC and other credible assessments as appropriate. The plan would include a prioritized list of vulnerable systems and regions, coordination mechanisms among government and communities, identification of gaps in research and technology, and cost estimates. Although this sort of assessment and listed components of an adaptation plan are at the heart of conventional adaptation planning and in theory would undergird the National Adaptation Strategy set forth in the bill, the section appears in one of the final sections of the bill under a Title called “Reviews and Recommendations,” and no language in the measure indicates what the function of the National Adaptation Plan is in the context of other adaptation programs set forth in the bill.

### **Investing in Climate Action and Protection Act (H.R. 6186)**

Congressman Edward Markey (D-MA), chair of the newly created House Select Committee for Energy Independence and Global Warming, recently introduced a measure in the House of Representatives that, like the Lieberman-Warner bill, attempts to control carbon dioxide release through a cap and trade system. However, the Markey bill (ICAP) takes a more sophisticated approach than Lieberman-Warner did to setting forth a comprehensive federal adaptation strategy. Investing in Climate Action and Protection Act, H.R. 6186, 110th Congress, Second Session (2008), available at <http://www.govtrack.us/data/us/bills.text/110/h/h6186.pdf>.

ICAP notes at the outset of its adaptation provisions the effects of climate change on human society. The bill lists community concerns such as increasing stress on over-allocated western water systems, more frequent wildfires, the acceleration of sea level rise and changes in storm surge patterns, coastal erosion and flooding, thawing permafrost in Alaska, and impacts on public health. ICAP’s language invokes the adaptation-speak already being batted around the IPCC and UNFCCC: risk management and reduction of vulnerability of systems and sectors, and perhaps the most significant, which is enhanced capacity of federal, state, local, and tribal governments to implement adaptation activities.

Where Lieberman-Warner sets forth general goals to increase the resiliency of ecosystems and directs states to enact their own plans, Markey’s ICAP sets up a broad government framework to marshal existing federal policies to implement adaptation activities. For example, with regard to the bill’s “National Climate Change Adaptation Council,” Markey proposes to include, in addition to federal agencies with jurisdiction over natural resources, the Departments of Health and Human Services, Homeland Security, Transportation, Housing and Urban Development, and Defense. The inclusion of these agencies indicates an understanding of adaptation as system- and sector-wide; adaptation to climate change must be considered in the policies of nearly every government agency. Even if ICAP suffers the same fate as Lieberman-Warner, this legislative entry of adaptation strategy into such a broad spectrum of federal policy could signal a sea change in how adaptation makes its way into future climate change bills.

The overarching structure that ICAP sets up to tackle such a massive adaptation undertaking is to assign the National Climate Change Adaptation Council the role of auditor and oversight forum to coordinate federal policy to accomplish adaptation goals identified in vulnerability assessments required by the bill’s National Climate Change Adaptation Plan. ICAP places the administrator of the National Oceanic and Atmospheric Administration (NOAA), the agency best equipped to shoulder the scientific and assessment burden, in charge of identifying national and regional vulnerabilities and identifying appropriate strategies to adapt to

climate change impacts. Importantly, the bill gives specific community and society-related direction in addition to evaluation of natural systems, to the administrator. For example, the administrator is to assess at varying geographic and time scales, impacts of climate change on human health, infrastructure, and social and economic sectors. The assessments must also include a nationally prioritized list of vulnerable systems and regions.

Like Lieberman-Warner, ICAP sets up both federal and state roles toward meeting climate change adaptation objectives. On the federal level, ICAP sets up a council to coordinate federal policy, directs comprehensive federal assessments of vulnerabilities, and provides for a clearinghouse within NOAA to distribute scientific information and decision-making aids. The bill also directs each federal agency to develop its own adaptation plan. However, 85 percent of the funding for adaptation is allocated to state, local, and tribal adaptation projects, with the goal of encouraging those governments to build adaptation capacity to bolster resiliency to the adverse impacts of climate change. The bill directs federal agencies to promulgate grantmaking regulations describing selection criteria and performance benchmarks for state, local, and tribal adaptation projects.

Finally, the international adaptation component of ICAP is quite similar to Lieberman-Warner, except that it provides for the contribution of 50 percent of monies designated in the bill for international adaptation aid to an international adaptation fund set up under the auspices of the UNFCCC. It is difficult not to speculate that Chairman Markey is suggesting that the door be opened to the United States' accession to the Kyoto Protocol or its successor convention in Copenhagen next year.

### **Climate Change Drinking Water Adaptation Research Act (S. 2970)**

While the Lieberman-Warner bill and Markey's ICAP seek, in addition to the reduction of GHGs, to establish comprehensive federal funding and adaptation policy, Sens. Harry Reid (D-NV) and Dianne Feinstein (D-CA) aim at a single sector with their drinking water

adaptation measure. Climate Change Drinking Water Act of 2008, S. 2970, 110th Congress, Second Session (2008), available at [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110\\_cong\\_bills&docid=f:s2970is.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:s2970is.txt.pdf).

This bill asserts the need for a comprehensive program of research into the full range of impacts on drinking water utilities, including impacts on water supplies, facilities, and customers. Although the bill's authors do not use the same adaptation-related language of ICAP and the international community in describing its proposed research program, effectively the bill seeks to conduct a ten-year, \$25 million vulnerability assessment of the drinking water industry and water supplies. Adaptation strategies identified in the bill for research include options for increasing water storage capacity in anticipation of erratic precipitation and diminished runoff, mitigation of the impacts of sea level rise on water delivery infrastructure, desalination, water reuse, and alternative supply technologies.

### **Climate Change Adaptation Act (S. 2355)**

The Climate Change Adaptation Act, introduced in May 2007 and reported with amendments in early June 2008, cites the IPCC's conclusions on the vulnerability of ecosystems and increasing risks especially from coastal erosion and sea level rise. Climate Change Adaptation Act, S. 2355, 110th Congress, Second Session (2008), available at [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110\\_cong\\_bills&docid=f:s2355rs.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:s2355rs.txt.pdf).

The measure would establish a National Climate Program within NOAA and require the President to provide to Congress a five-year National Strategic Plan for Climate Change Adaptation. The plan would, among other things, assess existing federal capability to address climate change impacts on federally managed resources, address vulnerabilities and priorities identified in existing assessments, recommend partnerships with state and local governments to coordinate implementation of the strategic plan, and identify existing legal authorities necessary to implement the plan.

The bill calls on the Secretary of Commerce to coordinate and support regional assessments of the vulnerability of coastal and ocean areas and resources and to submit a coastal and ocean adaptation plan to Congress. The plan would be composed of individual regional adaptation plans recommending targets and strategies to address the adverse impacts of climate change. Adaptation plans would recommend strategies regarding land use, economic planning for small coastal communities, coastal hazards, ecological processes, species, and habitat. Finally, the bill would provide grants, through NOAA, to coastal states for developing and implementing coastal and ocean adaptation plans.

### **Coastal State Climate Change Planning Act of 2008 (HR 5453)**

Introduced by Lois Capps (D-CA), this bill amends the Coastal Zone Management Act of 1972 to authorize assistance to coastal states to develop coastal climate change adaptation plans. Coastal State Climate Change Planning Act of 2008, H.R. 5453, 110th Congress, Second Session (2008), available at [http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110\\_cong\\_bills&docid=f:h5453ih.txt.pdf](http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=110_cong_bills&docid=f:h5453ih.txt.pdf) It provides grants to coastal states to develop plans to address effects of climate change. The state plans must include land use adaptive management strategies “to respond or adapt to changing environmental conditions, including strategies to protect biodiversity and establish habitat buffer zones, migration corridors, and climate refugia.”

In February 2008, this bill was referred to the House Committee on Natural Resources, but no other action has been taken. House Subcommittee on Fisheries, Wildlife and Oceans: Oversight Hearing on “Planning for a Changing Climate and its Impacts on Wildlife and Oceans: State and Federal Efforts and Needs.”

On June 24, 2008, the House Subcommittee on Fisheries, Wildlife and Oceans held a hearing to query witnesses from environmental organizations, states, and the Departments of the Interior and Commerce on the status of efforts toward adaptation planning for fish, wildlife, and coastal sectors and what Congress could

do to facilitate the development and implementation of adaptation strategies. Full testimony available at [http://resourcescommittee.house.gov/index.php?option=com\\_jcalpro&Itemid=54&extmode=view&extid=194](http://resourcescommittee.house.gov/index.php?option=com_jcalpro&Itemid=54&extmode=view&extid=194).

The testimony from witnesses representing California, the Coastal States Organization, and Virginia showed that states are leading the federal government in terms of considering and implementing adaptation solutions. David Whitehurst of the Virginia Department of Game and Inland Fisheries suggested federal-state

### **Further Reading on Climate Change Adaptation:**

- “Adaptation Planning: What U.S. States and Localities are Doing,” Pew Center on Global Climate Change, Nov. 2007 (updated Apr. 2008), available at [http://www.pewclimate.org/docUploadsState\\_Adapation\\_Planning\\_04\\_23\\_08%20\\_2\\_.pdf](http://www.pewclimate.org/docUploadsState_Adapation_Planning_04_23_08%20_2_.pdf)
- “Weathering the Storm: Options for Framing Adaptation and Development,” World Resources Institute, Nov. 2007, available at <http://www.wri.org/publication/weathering-the-storm>.
- “A Survey of Climate Change Adaptation Planning,” The Heinz Center for Science, Economics and the Environment, October 10, 2007, available at [http://www.heinzctr.org/publications/PDF/Adaptation\\_Report\\_October\\_10\\_2007.pdf](http://www.heinzctr.org/publications/PDF/Adaptation_Report_October_10_2007.pdf).
- “Adapting to Climate Variability and Change: A Guidance Manual For Development Planning,” U.S. Agency for International Development, Aug. 2007, available at [http://www.usaid.gov/our\\_work/environment/climate/docs/reports/cc\\_vamannual.pdf](http://www.usaid.gov/our_work/environment/climate/docs/reports/cc_vamannual.pdf).
- Pielke, Roger, *Lifting the Taboo on Adaptation*, NATURE, Vol. 44, Feb 8, 2007.

collaboration modeled from the partnership between states and the U.S. Fish and Wildlife Service (FWS) to develop State Wildlife Action Plans under the State Wildlife Grants program administered by FWS. Tony Brunello, representing both the California Resources Agency and the Coastal States Organization, urged a comprehensive federal adaptation strategy that cuts across all sectors. Donning his California Resources Agency hat, Mr. Brunello described California's climate adaptation strategy: although the state adaptation strategy is still in the early stages, California is already implementing adaptation measures for ocean and coastal resources, water, and biodiversity conservation.

Witnesses from the federal resource agencies described "beginning steps" in considering adaptation to climate change, but conceded that they needed Congressional direction, authority, and funding to develop and implement adaptation plans for the resources under their respective jurisdictions. Margaret Davidson, director of NOAA's Coastal Services Center, said that NOAA could not produce formal guidance unless Congress passed a new Coastal Zone Management Act. Dan Ashe, science advisor to the director of FWS, testified that the Department of the Interior is currently developing a "Climate Change Strategic Plan," but he could not say that FWS or the department was embarking specifically on adaptation planning.

In general, the witnesses representing states testified about the need for a comprehensive national adaptation plan and gave concrete examples of how states and federal agencies could work together to achieve adaptation goals. Federal witnesses said they could not act without legislative authority and funding to develop adaptation plans. When pressed by the subcommittee for a description of existing agency efforts, the federal witnesses' answers were scattered and indirect, sharply illustrating the need for a federal strategy that would enable interagency cooperation toward the execution of a common national plan.

## Conclusion

Adaptation has taken center stage alongside mitigation of GHGs in the congressional climate debate; it is

extremely significant that a congressional subcommittee convened a hearing on the matter, independent of the topic of mitigation. Almost as significant is the fact that the two federal agencies with primary authority over the natural resources of the United States, while unable to articulate federal efforts to develop adaptation-specific guidance or plans, could credibly testify that the conversations have, in fact, begun.

While several measures featuring adaptation provisions have been introduced in Congress, and while adaptation has found its way regularly into policy discourse in multilateral meetings held by the United States, no legislation has yet become law. However, it is now clear that any global climate change legislation that is signed into law must not address the impacts of climate change solely by devising a way to reduce carbon emissions. Adaptation will take its place alongside mitigation as a powerful tool to buttress defenses against the adverse effects of global climate change.

**Ira Feldman** is president and senior counsel of greentrack strategies, a multidisciplinary practice focusing on strategic environmental management, regulatory innovation and sustainability policy. Ira is past chair of the Climate Change, Sustainable Development, and Ecosystems Committee and currently Ecosystems vice chair. **Sarah L. Jensen** is an attorney in solo practice specializing in natural resource, environmental, native Alaska, and subsistence issues. She is a member of the Virginia Bar.

### CLIMATE CHANGE, SUSTAINABLE DEVELOPMENT, AND ECOSYSTEMS COMMITTEE ONLINE

#### Committee Web Page:

[www.abanet.org/environ/committees/climatechange/](http://www.abanet.org/environ/committees/climatechange/)

#### Committee List Serve:

[environ-sdev\\_eco\\_cchg@mail.abanet.org](mailto:environ-sdev_eco_cchg@mail.abanet.org)

## **CLIMATE CHANGE AND SUSTAINABLE DEVELOPMENT: THE WASHINGTON STATE EXAMPLE**

---

**Ross A. Macfarlane**

In the absence of federal leadership on climate change, most of the activity has been happening at the local, state, and regional levels. While much of the rationale for this action has been to spur national climate legislation, there is an increasing awareness that policies will be needed at all levels. Global warming pollution comes from all sectors of the economy and many of the toughest and most important sectors will need to be addressed by states and local governments. For example, the amendments to utility regulation and building codes that will be needed to improve wasteful use of energy and widespread incorporation of renewables will need to happen at the state level. Another key example involves policies addressing land use and transportation. This article summarizes the efforts in Washington State to address climate change in this sector.

Washington State has become a national leader in the effort to develop policies to address global warming pollution and to spur the transition to a lean and clean-energy future. These policies have significant impacts across the economy and will require attention from many sectors that, heretofore, have not considered themselves to be on the front lines in the battle against climate change. This is particularly true for builders, developers, and local governments.

Many still think of global warming pollution as a problem of smokestacks from electrical utilities and heavy industry. But in Washington, it really has much more to do with cars, houses and offices. Approximately half of the global warming pollution produced in the state comes from the gasoline and diesel burned in our cars and vehicles. Nationally, the transportation sector contributes about one-third of the total greenhouse gas emissions, with about 60 percent of that total coming from personal vehicles. Washington's larger percentage is due mostly to the relatively clean electrical supply from hydropower and steps the state has already taken to improve energy

efficiency and increase the use of renewable energy. Nevertheless, greenhouse gases associated with our transportation and land use patterns are a big part of the emissions picture nationally, and the kinds of solutions being pioneered in Washington and other leadership states will be very important to any comprehensive strategy.

Washington has been working to address climate change and promote clean and renewable energy for a number of years. In recent years, for example, Washington has adopted standards requiring increased use of renewable energy and efficiency improvements, tough standards for fossil-fueled power plants, and a more stringent building code. In the transportation area, Washington adopted a renewable fuel standard to promote use of biofuels, and more stringent tailpipe standards modeled on California's standards (currently blocked by the federal Environmental Protection Agency's refusal to grant a waiver under the 1990 Clean Air Act). In 2007, Gov. Christine Gregoire issued an executive order setting goals for greenhouse gas reductions and established the Climate Action Team—a very broadly based stakeholder group of leaders from business, conservation, labor, academic, local government, faith, and civic communities appointed by Gov. Gregoire, which concluded that climate change was the defining challenge of our era and unanimously supported a sweeping set of recommendations. *See, Leading the Way on Climate Change: the Challenge of Our Time*, <http://www.ecy.wa.gov/pubs/0801008a.pdf>.

Based in large part on these recommendations, the Washington Legislature enacted bills on two parallel tracks in the 2008 session to reduce global warming pollution and speed the transition to a cleaner and more energy-efficient economy. The first involves capping global warming pollution statewide while accelerating investment in the clean-energy economy, and providing training and opportunities for green jobs. This bill also included a nationally leading program to reduce vehicle miles traveled as a core approach to reducing greenhouse gases (GHGs). The second track weaves climate objectives into the existing fabric of state and local law and planning.

## **Climate Action and Green Jobs: Linking limits on global warming pollution with investments to deliver broadly shared prosperity in the green economy**

Climate Action and Green Jobs (HB 2815) makes Washington the fourth state to adopt comprehensive limits on global warming pollution and the first state to feature workforce training for the clean-energy transition as an integral part of its climate policy. Recognizing the importance of the transportation sector, it also makes Washington the first state to set specific targets for reducing the amount of vehicle trips in the state. Full text of the bill can be found at <http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/Session%20Law%202008/2815-S2.SL.pdf>.

HB 2815 provides the foundation for accelerated private investment and public action to implement the Climate Action Team's recommendations, which will, in the future, collectively reduce global warming pollution, increase green jobs, and reduce fossil fuel imports significantly more than statewide limits established in the current bill. Many of these recommendations address specific changes in our land use, development, and transportation.

The Climate Action and Green Jobs bill establishes mandatory limits and accountability for reducing global warming pollution in the state. Specifically, it

- Establishes limits on global warming pollution in Washington's Clean Air Act and provides for emissions reporting and periodic review to true-up limits as scientific requirements for climate stabilization evolve.
- Establishes a comprehensive green-economy job training initiative aimed at tripling the number of green jobs by 2020. The program will equip existing workforce training institutions to achieve broader workforce participation and provide pathways out of poverty in the green economy.
- Commits Washington to collaboration with six other western states and three Canadian provinces to develop a cap and trade system under the Western Climate Initiative. <http://www.westernclimateinitiative.org/>.

## **Limiting the Growth in Vehicle Miles Traveled**

Section 8 of HB 2815 specifically addresses the link between transportation and global warming emissions. It requires that the state take steps to reduce vehicle-miles traveled (VMT), meeting the following benchmarks: 18 percent reduction of annual per-capita VMT by 2020, 30 percent by 2035, and 50 percent by 2050. This provision reflects the legislature's recognition that transportation accounts for roughly half of the state's GHG emissions, and as long as annual vehicle miles traveled continues to grow, we will never be able to meet the state's reduction goals. Although tighter standards to reduce tailpipe emissions and lower carbon fuels are vital to reducing GHG emissions, they won't get the job done. As stated in the Climate Action Team's interim report, "To put it bluntly, without reductions in vehicle miles traveled (VMT) by single-occupancy vehicles, we are unlikely to meet the State's goals for emissions reductions." This mirrors the conclusions of national studies indicating that increasing VMT will negate the positive effects of tighter Corporate Average Fuel Economy (CAFE) standards and measures to reduce carbon in fuels.

The VMT provision provides a framework for state and local governments to develop tools and strategies to reduce VMT with real transportation alternatives to local communities. The bill does not limit driving by Washington residents. Instead, it requires a paradigm shift for transportation planning and projects. Instead of continuing to plan for new highways based on extrapolations of past growth, the bill requires transportation agencies to rethink their assumption. This encourages better management of our existing infrastructure through strategies such as congestion pricing and tolling and offering more mobility options from public transit to walking and biking.

## **Local Solutions to Global Warming (Substitute Senate Bill 6580): Making climate solutions a priority in state and local decisions**

Our transportation options are closely related to the built environment and the effect that land use patterns

have on our daily trips. Washington's Growth Management Act (GMA), Chapter 36.70A RCW, provides the framework for land use planning in the state. The Local Solutions to Global Warming Bill (SSB 6580) takes the first steps toward using this act as a tool to address climate emissions resulting from development and transportation. As originally proposed, the bill would have established reducing GHG emissions as a new goal and set a schedule for major local jurisdictions to address this goal in planning and review decisions made under the GMA framework. But the bill ran into substantial opposition because of the GMA's controversial nature and concerns about the potential for appeals and regulatory gridlock. As it has been signed into law, the bill directs the State Department of Community Trade and Economic Development (CTED) to provide cities and counties with a tool to inventory, measure and estimate land use-related GHG emissions, and it allows CTED to choose whether to create a new tool or update an existing modeling system.

The bill creates a competitive grants program available for cities and counties that elect to address climate change through their land use and transportation planning. It establishes a stakeholder process of yearly reports to the legislature with policy recommendations for local governments to address climate change through their land use and transportation plans. It also offers means for local governments to see planning decisions through a climate lens, launching an important dialogue on how future development will shape the carbon footprint of our communities. Full text of this bill is available at <http://apps.leg.wa.gov/documents/billdocs/2007-08/Pdf/Bills/Session%20Law%202008/6309-S.SL.pdf>.

### **Review and Mitigation of Climate Pollution under the State Environmental Policy Act**

One of the key statutes for development and project planning in Washington is the State Environmental Policy Act (SEPA), Chapter 43.21C RCW. The Washington State Department of Ecology (Ecology) has confirmed that SEPA already requires major construction projects to analyze global warming pollution and potential mitigation measures. Ecology

has indicated that it will commence a stakeholder process to clarify the assessment and mitigation of climate impacts and has notified local governments that they will be responsible for addressing these issues in SEPA analyses. <http://www.ecy.wa.gov/programs/sea/sepa/climatechange/index.htm>. This approach follows the leadership of King County, one of the first jurisdictions in the country to require analysis of climate impacts in its local SEPA review. <http://www.kingcounty.gov/operations/policies/executive/utilitiesaeo/put7101aeo.aspx>. Other jurisdictions, including the City of Seattle, are following this lead by requiring developers to analyze climate impacts in their SEPA review for new proposals.

Led by California and Massachusetts, a handful of areas in the country now require analysis of global warming pollution in major project developments and are developing protocols to facilitate that analysis. A number of major lawsuits and settlements have resulted in California, involving comprehensive plans and major industrial facilities that have been challenged under the California Environmental Quality Act (CEQA). The California Attorney General's (AG's) Office, for example, brought a lawsuit and negotiated a major settlement requiring San Bernardino County to analyze global warming emissions and to implement mitigation measures in its comprehensive plan. Similarly, the AG's office negotiated a settlement with ConocoPhillips, requiring investments of more than \$10 million to offset anticipated GHG emissions from a proposed oil refinery. California is developing guidelines for governments and proponents of development projects in this new world. *See, e.g.*, <http://www.climatechange.ca.gov/publications/others/CAPCOA-1000-2008-010.PDF> (good analysis of tools to analyze climate change under CEQA by the California Air Pollution Control Officers Association). These tools will be very relevant to development and planning in Washington State.

Although climate change has not yet been the subject of major litigation under SEPA, this will likely change soon. The Puget Sound Clean Air Agency, for instance, has already used SEPA and its general mitigation authority under the Clean Air Act to require specific mitigation measures by the proponents of gas-fired

generating facilities proposed within its region. Practitioners from all perspectives should strongly support the efforts of state and local agencies to develop extremely clear guidelines for analysis and mitigation, including protocols for measuring global warming emissions and updated checklists, to minimize the significant litigation threat looming over major projects in the absence of clear guidance.

### **Green Buildings: Pushing the envelope with public leadership and incentives, consolidating gains with codes**

In addition to transportation, the built environment is responsible for a large portion of the nation's energy use and GHG emissions. According to the U.S. Energy Information Administration, buildings are responsible for almost half of the nation's annual GHG pollution and eat up more than two-thirds of all electricity generated by U.S. power plants. The market for green building practices has skyrocketed, thanks in part to the Leadership in Energy and Environmental Design (LEED) rating system that creates standard measurement and certification tools for environmentally sustainable construction standards. The U.S. Conference of Mayors and the American Institute of Architects (AIA) has adopted The 2030 Challenge, a strong standard for building efficiency to lessen dependence on fossil fuels <http://www.architecture2030.org/>. The Washington Legislature is likely to consider a proposal to make this 2030 standard part of state law in the next session.

Washington is also pioneering standards for public buildings. It passed a statewide law in 2005 requiring new public buildings to meet LEED's silver standard, based on successful experience in Seattle and Portland, Oregon. In November 2006, Washington voters approved Initiative 937, which required electric utilities to pursue all low-cost energy conservation opportunities with their customers and in their communities. The experience of green building in the public sector and clear directives for energy productivity among utilities' customers will leverage for ever-stronger building codes and the efficiency of existing buildings.

Developers who are interested in leading the next wave can find exciting opportunities in many areas, ranging from the places that we choose to develop, the kinds of products and technologies that we use, and the way that we finance construction. Many developers are looking to urban infill projects and industrial "brownfields" that utilize cutting-edge clean technologies and offer real transportation choices to provide exciting alternatives to new generations of consumers. *See*, Alex Steffen, *The Cities of the Future—Today*, Worldchanging (May 2008), <http://www.worldchanging.com/archives/007986.html>. Similar innovations are happening in the office development area, where leading-edge designers are making zero-emissions buildings a real possibility. *See*, Environmental Defense Fund, *Innovations Review: Making Green the New Business As Usual* (May 2008).

Washington leadership in the design of green and energy-efficient new buildings, as well as in practical ways of increasing efficiency of our building stock, is showing positive economic returns. A recent study by GreenWorks Realty shows that green buildings remained on the market 24 percent less time and sold for 4.8 percent more than non-green buildings in Seattle. <http://seattle.bizjournals.com/seattle/stories/2008/05/05/story9.html?b=1209960000^1629446&page=2>. Green and efficient building design is a rapidly growing sector in Washington, creating national and international opportunities for many architectural, engineering, and design firms.

### **Conclusion**

As reflected in the report of the Washington Climate Advisory Team, addressing global warming is the "Challenge of Our Time," and one that will touch all sectors of our economy. Washington's experience illustrates the importance of addressing climate change at all levels of government and avoiding a single focus on federal legislation or administrative developments. While federal policy is critical, states and local governments will also have to play a major role in shaping our response to this critical issue. Washington's efforts to address GHG emissions in planning and project decisions for transportation and land use

provides useful examples for other states around the country that are grappling with these issues.

**Mr. Macfarlane** is a senior advisor for Business Partnerships at Climate Solutions in Seattle, Washington. He has more than 25 years of experience working on public policy and environmental issues. Climate Solutions is a Northwest-based non-profit that seeks to accelerate practical and profitable solutions to global warming in the region.

## **FLORIDA'S CLIMATE ACTION PLAN**

---

**Angela Morrison Uhland  
Paula L. Cobb**

During his first State of the State address in March 2007, Florida's Gov. Charlie Crist made climate change a priority for the state. He proclaimed global climate change as one of the most important issues facing the State of Florida this century, and since then Florida has rapidly moved forward to address the state's greenhouse gas (GHG) emissions. This article outlines Florida's various climate change initiatives currently underway, including very recent legislation passed by the Florida Legislature and signed by the Governor on June 25, 2008. House Bill 7135, <http://www.flsenate.gov/data/session/2008/House/bills/billtext/pdf/h713502e2.pdf>.

### **Greenhouse Gas Reduction Goals**

As a huge "first step" toward addressing GHG emissions in the state, and after vetoing what he called a weak climate change bill passed by the 2007 Florida Legislature, Gov. Crist held a "Climate Change Summit" in July 2007 and issued three Executive Orders related to climate change. <http://www.dep.state.fl.us/climatechange/>. Most significantly, through the Executive Orders he established the following statewide goals for Florida: reduce GHG emissions to 2000 levels by the year 2017, reduce to 1990 levels by 2025, and reduce to 20 percent of 1990 levels by 2050. For state government, Executive Order 07-126

established the following reduction goals: reduce 10 percent below current levels by the year 2012, 25 percent by 2017, and 40 percent by 2025.

Although the governor's goals are similar to those set by other states and regions, they are particularly daunting for Florida, as the "second-fastest growing state in the union with respect to the annual increase of new greenhouse gas emissions." Executive Order 07-127. GHG emissions track population growth, and Florida's population is expected to double from 18 million residents in 2006 to 36 million residents by the year 2060. Under a business as usual scenario, Florida's GHG emissions would also double. The reduction goals, on the other hand, aim to reduce the state's GHG emissions to only a small fraction of that projection.

In Florida, approximately 49 percent of the GHG emissions are attributable to electric utilities and 43 percent are attributable to transportation. Industrial and other miscellaneous sectors account for only 8 percent. The initial focus of the Executive Orders was therefore on the utility and transportation sectors. As directed by the Executive Orders, the Florida Department of Environmental Protection (Department) immediately began rulemaking late in the summer of 2007 to address electric utility and mobile source GHG emissions. That rulemaking is ongoing and is described more fully below.

### **Action Team/Energy Commission**

The Executive Orders established a governor-appointed "Action Team on Energy and Climate Change" tasked with creating a Florida Climate Change Action Plan. In its Phase I report, delivered to the governor in November 2007, the Action Team offered recommendations on a wide range of climate change-related topics, and its Phase II report is due Oct. 1, 2008. <http://www.dep.state.fl.us/ClimateChange/team/support.htm>.

The Florida Legislature's Energy Commission (Commission), created in 2006 and comprised of nine members appointed by the Florida Senate and House leaders, has also addressed climate change issues. Late

in 2007 the Commission issued a climate change report for the Legislature along with draft legislation. Some of that legislation was approved by the Legislature in May at the conclusion of its 2008 Session. In fact, HB 7135 restructured and renamed the Commission. The *Florida Energy and Climate Commission*, not yet seated, will be composed of members appointed by the governor, the chief financial officer, and the secretary of the Department of Agriculture and Consumer Services, will have additional duties and authority to implement a number of energy and climate-related programs. The Commission is also expected to issue a report in 2008 with additional legislative proposals for the 2009 Legislative Session.

### **Electric Utilities—Cap and Trade Program**

Executive Order 07-127 directed a reduction in electric utilities' GHG emissions to 2000 levels by 2017, 1990 levels by 2025, and 20 percent of the 1990 levels by 2050, consistent with the statewide goals. Reaching these goals is not an easy task for Florida, as it ranks fifth nationally in the amount of energy consumed per capita and third in total energy consumption. Approximately 1,000 people move to the state every day, accounting for an annual population increase of 2.74 percent. With this increase in population comes increased energy demand. The demand for electricity is expected to more than double between 2006 and 2050 (increasing from 230 terawatts to almost 600 terawatts), while during this same period GHG emissions from the electric utility sector must be significantly reduced. The goal is to reduce the current level of GHG emissions from 130 million metric tons of carbon dioxide equivalent (MMTCO<sub>2</sub>E) to 116 in 2017, to 86 in 2025, and to 17 in 2050. The business-as-usual level projected for 2050 is 315 MMTCO<sub>2</sub>E. Reaching the 2050 goal would therefore require an 87 percent reduction from the current level of GHG emissions and a 95 percent reduction from the business-as-usual level.

Consistent with the Executive Orders and ongoing Department rulemaking, the 2008 Legislature passed "The Florida Climate Protection Act" authorizing a market-based program to reduce GHG emissions from electric utilities. The cap and trade approach described

in the legislation includes a state-wide cap, the use of "allowances" as authority to emit GHGs, and the market-based trading of allowances among sources as a means of compliance with the cap. The legislation provides that the Department "may" adopt rules, in consultation with the Commission, the Public Service Commission, and the Action Team, although such rules are not to be adopted until after Jan. 1, 2010 and require ratification by the Legislature before becoming effective. Once effective, the rules are to be implemented for a trial period before full implementation.

The legislation requires the Department to consider cost containment mechanisms, such as borrowing allowances from future time periods or banking reductions to be used in the future to reduce price and cost risks associated with the electric generation market in Florida. The Department may also adopt rules that allow utilities to purchase offsets from non-utility-sector entities who produce verifiable reductions in unregulated GHG emissions or who capture and store GHGs that would otherwise be released into the atmosphere. The rules may include a "safety valve" mechanism to ensure that market prices for allowances do not surpass an affordable level or affect the well-being of the state's economy. In addition to consideration of costs, the Department's rules must attempt to prevent "leakage" of GHGs to neighboring states.

The legislation establishes several factors the Department must consider in developing the cap and trade program, including the overall cost-effectiveness of the system, overall costs and benefits to the state's economy, impacts on electricity prices for consumers, impacts on low-income consumers, implications for meeting the GHG targets (presumably those identified in the Executive Orders), consistency with other state and federal efforts, possible linkage with other states' or countries' trading systems, the feasibility and cost-effectiveness of extending the program beyond utilities to other sectors, benefits to Florida's economy for early adoption of the program in the context of federal legislation and new international compacts, and benefits to Florida's economy associated with the creation and sale of offsets from other economic sectors. The

Commission is to confirm, through a report to the governor and Legislature, whether these factors were appropriately considered by the Department during the rulemaking. The Commission is also to consider the timing of a federal program and whether it might cause Florida's program to be re-evaluated or supplanted and whether Florida's program should be broadened to include other non-utility sources and forms of offsets.

The legislation also provides, consistent with the Executive Orders, that electric utilities shall be required to report their GHG emissions using The Climate Registry.

### **Mobile Source Emissions**

Executive Order 07-127 directs the Department to adopt the California motor vehicle emission standards, pending approval of California's waiver request by the U.S. Environmental Protection Agency (EPA). Despite EPA's denial of this waiver request, the Department is moving forward with rulemaking to adopt the emission standards and has joined California's lawsuit seeking to overturn denial of the request. The Florida Climate Protection Act requires ratification by the Florida Legislature before the standards may be implemented. Ratification is also required before any modifications to the Department's rule may be implemented. The Department's conceptual proposal sets commencement of the California program in Florida, if the Department's final rule is ratified by the Legislature, for two model years after approval of the waiver.

Rule language has not been officially proposed, but on June 19, 2008, the Department presented its plan to adopt the emission standards to its standard-setting body, the Environmental Regulation Commission (ERC). The Department plans to adopt California's Low Emission Vehicle (LEV II) tailpipe standards, fleet average emission standards for GHG and non-methane organic gases (NMOG), and associated procedures such as the rebate requirements. The tailpipe standards for new vehicles, which must be California certified, regulate NMOG, nitrogen oxide (NO<sub>x</sub>), carbon monoxide (CO), formaldehyde, and particulates. The fleet average emission standards

address NMOG and GHG through a cap-and-trade system and credits for flex-fuel vehicles and hybrids. In the Department's conceptual proposal, compliance with the California motor vehicle emission program is based on the number of vehicles delivered for sale, lease, or renting in Florida. It is expected the Department will present a proposed rule to the ERC for adoption in September 2008.

Per Executive Order 07-127, which directs the Department to adopt a statewide diesel engine idle reduction standard, the Department conducted rulemaking workshops to adopt such a standard. On June 19, 2008, the ERC approved the Department's proposed standard, targeted to motor vehicles powered by a heavy-duty diesel engine with a gross vehicle weight rating equal to or greater than 8,500 pounds, used on roads for the transportation of passengers or freight, and serving a commercial, governmental, or public purpose. This target could change over time because the Department has indicated this will be a "phased" program. The standard limits idling to no more than five consecutive minutes, with exemptions for certain types of vehicles (such as emergency and law enforcement) and activities (such as idling because a traffic signal or condition and idling when operating defrosters, heaters, and air conditioners solely to prevent a safety or health emergency). There is also a temporary exemption (to be eliminated after five years) for idling during sleeping or resting in a sleeper berth. Mainly, compliance will be managed through education, behavioral shifts, and the inclusion of certain technologies, but the Department may also use its general enforcement authority, which may include the use of fines.

In addition to these efforts to reduce mobile source emissions, the Legislature created the "Florida Renewable Fuel Standard Act" requiring that after Dec. 31, 2010, all gasoline sold in the state must be blended with at least 9 to 10 percent fuel ethanol (produced by the conversion of carbohydrates). Also by that date, the Commission must conduct a study that will evaluate and recommend lifecycle GHG emissions associated with all renewable fuels (including biodiesel and ethanol), make recommendations to ensure a reduction GHG emissions, and consider a

banking and trading program for credits among refiners, blenders, and importers.

## **Renewable Portfolio Standard/Net Metering**

Executive Order 07-127 also requested the Public Service Commission (PSC) to initiate a rulemaking to: (1) establish a Renewable Portfolio Standard (RPS) requiring utilities to produce at least 20 percent of their electricity from renewable sources, with a focus on wind and solar energy, (2) reduce the costs of connecting renewable energy technologies to Florida's power grid,; and (3) authorize a statewide method for residential and commercial customer net metering. HB 7135 requires the PSC to develop a draft RPS by Feb. 1, 2009. In the rulemaking to develop the RPS, the PSC must consider current and forecasted levelized costs and installed capacity for each renewable energy generation method through the year 2020. The PSC must include methods of managing RPS compliance costs, whether through direct supply or procurement of renewable power or through the purchase of renewable energy credits, and may give preference to wind and solar forms of energy. Interestingly, the legislation did not mandate a 20 percent level for renewable energy sources as suggested in the governor's Executive Order. The PSC is moving forward with its rule development; workshops are being conducted, and rule language is expected within the next few months.

To further encourage the use of renewable energy sources in Florida, the Legislature established requirements for improved demand-side management and energy efficiency. It also provided incentives through credits, tax exemptions, and grants for renewable energy initiatives and programs. Additionally, by Jan. 1, 2009, each utility must develop a standardized interconnection agreement and net metering program for customer-owned renewable generation.

## **Next Steps**

Climate change policy in Florida is still evolving. Rulemakings to address sources of GHG emissions are ongoing, and the Action Team continues to develop Florida's Climate Action Plan. The governor's recent

Climate Change Summit, held June 25-25, 2008, focused on stimulating economic development in Florida through clean technologies, "greening" Florida's business community, and expanding Florida's renewable and alternative energy marketplace. The upcoming year promises to be as active as the last.

**Angela Morrison Uhland** is a shareholder and **Paula L. Cobb** is an associate with the Tallahassee, Florida, law firm of *Hopping Green & Sams, P.A.* Their practices involve siting energy facilities as well as advising clients on climate change issues. Angela is chair of the ABA Section of Environment, Energy, and Resources' Air Quality Committee.

## **ABA SECTION OF ENVIRONMENT, ENERGY, AND RESOURCES**

### ***Calendar of Section Events***

#### **16th Section Fall Meeting**

Sept. 17-20, 2008  
Phoenix, Arizona

#### **The Basic Practice Series—An Introduction to Environmental Law**

Sept. 19-20, 2008  
Phoenix, Arizona

#### **27th Annual Water Law Conference**

Feb. 19-20, 2009  
San Diego, California

#### **38th Conference on Environmental Law**

March 12-15, 2009  
Keystone, Colorado

***For more information, see the  
Section Web site at  
[www.abanet.org/environ/](http://www.abanet.org/environ/).***

## SEA LEVEL RISE ADAPTATION IN NORTH CAROLINA

---

**Lindsay Wilkes  
Tom Cors**

After decades of debating, the scientific community, world governments, and the general public have arrived in the era of acceptance that global climate change is occurring and that human beings are largely the cause. Now the debate centers on a different question: what can we do?

By now, we have all heard of programs aiming to combat global climate change from the source side: by reducing carbon emissions, discouraging energy use and resource consumption, and preserving carbon-absorbing ecosystems. The Lieberman-Warner bill, for example, seeks to create the first U.S. carbon trading program to encourage carbon emission reduction. Programs like these aim to reduce the amount of carbon in the atmosphere over time, and perhaps several decades into the future we will see positive effects from these efforts.

Reduction of emissions is certainly essential for long-term solutions. However, we also know that the wheels of climate change have been in motion for some time now, and it is already too late to remedy some of the impacts of climate change. Yet we have not seen many plans of action to address the actual, physical consequences currently arising from global climate change.

Why is this? Perhaps because the problem of global climate change is so vast in both its formation and its solutions, people have become overwhelmed. Much mainstream media attention highlights the effects of climate change with television programs broadcasting abysmal scenes of widespread pollution, overpopulation, melting ice caps, species loss, crippling habitat damage, destruction of property, and increased severity of weather events and diseases. Consequently, the feeling is widespread that this crisis is so big that nothing can be done.

## Shift to Adaptation

Critical to addressing the effects of global climate change is to begin planning for adaptation. Losses of species and changes in habitat may be inevitable, but some damages can be mitigated. Therefore, just as critical, the message must be communicated that if any mitigation will be achieved, we need to implement adaptation plans. For a coastal area, this includes restoring wetland hydrologics, assisted movement for habitats, and restoring aquatic vegetation and oyster reefs.

Educating the public on concrete plans to tackle the looming impacts of climate change will create a more positive attitude. Awareness and optimism will induce more involvement and support of projects. If people see the possibilities of effective solutions, more effort and more funding will be invested to implement any successful plans developed. In turn, there is a greater chance that more species and ecosystems can adapt in time, and more property can be protected.

Discussions on the state and local level have begun across the United States to address the current and future impacts of climate change. The coastal states in particular have taken initiative to devise plans for adaptation because of the significant threats posed by accelerating global sea level rise. The resulting flooding and erosion of these coastal communities will have devastating effects, including drastic changes in the natural communities and the shape of the coastline, loss and damage of personal property, and destruction of coastal infrastructure, livelihoods, and economies. It is urgent that these communities prepare by developing plans that will slow the impact of sea level rise and reduce the severity of damage.

## Adaptation on North Carolina's Coast

The Albemarle-Pamlico region on the coast of North Carolina is one area of the United States that can be a key pilot in developing global climate change adaptation plans. The region is a blend of brackish marshes, freshwater creeks and rivers, pocosin bogs, peat soils and swamp forests. Although the landscape of the Albemarle-Pamlico actually thrives on the

incursion of water, salt water intrusion from rising seas would inevitably destroy the fabric of this wetland ecosystem. The biggest threats from sea rise facing the Albemarle region are: (1) permanent inundation of land from higher sea level, (2) salt water intrusion into the interior regions destroying freshwater areas and vital peat soils, and (3) stronger storms and wave energy battering and eroding the coast line.

Studies indicate that the Albemarle is one of the most vulnerable lands in the country to climate change. Currently, the area is subsiding to the sea at a rate of two inches per decade. However, sea level rise is predicted to accelerate, and the rate of loss will double in the next fifty to 100 years. Projections show such a rise could occur in as little as seventy years. How great is the impact with a rise of one meter? The area could lose as much as a million acres.

Lands have subsided to the ocean countless times over the course of geologic history. The difference between sea level rise now and sea level rises in the past is how *rapidly* the change is occurring now. Previous sea level rises have occurred over hundreds or thousands of years. Hence, the issue is not just that sea level rise is occurring, but that it is simply occurring too quickly for most ecosystems, plants, and animals to adjust to the changing environment. Therefore, the goal of a sea level adaptation plan is to focus not on preventing the sea from rising, but on slowing down the impacts. The more time that ecosystems have to adjust to the shifting environment, the greater chance they will survive or evolve and maintain good health.

## **Adaptation Techniques**

The adaptation concept favors developing plans that include “soft armoring” techniques rather than “hard armoring.” Hard armoring involves methods that seek to prevent damage from the sea by keeping it out, by building walls or levees, for example. These tactics may offer more immediate and direct protection for human infrastructure, and thus, these may be favored by private landowners to keep the sea away from their property. The benefits of hard armoring, however, are likely to be short-term as the sea continues to rise over time. Further, hard armoring does nothing to prepare

the natural community for an incursion of sea water. Soft armoring, on the other hand, seeks to apply techniques that prevent damage but do not interfere with the needs of natural communities. These would include, among other approaches, installing plants that prevent erosion. Soft armoring will have more long-term benefits for the ecosystems, because they provide opportunities for the ecosystem to adapt.

Plans that have been proposed for Albermarle-Pamlico region favor soft armoring over hard armoring. The Alligator River project, for example, will study the flow of water into and out of an extensive system of hundreds of manmade ditches throughout the Albemarle. As the sea level rises, these ditches will become avenues for salt water intrusion. Salt water is very destructive to the peat soils that support the ecosystem. The project aims to identify which ditches can be plugged and where water control structures can be installed to selectively let water in and out. The peat soils can then remain intact for much longer.

Shore lands that will inevitably be submerged can be planted with flood- and salt water-tolerant species. These species will do better than what is currently there, but also contribute to improving the health of the soils, water, and animal life and establish a climate resilient ecosystem.

Along the coast, natural barriers for wave energy can be restored to help prevent erosion. One plan is to construct natural oyster reefs native to the area to reduce wave energy and possibly build up shoreline. In addition to sheltering the shoreline, the reefs will also provide healthy habitats for animal species and can be planted with salt-tolerant grasses. Further, efforts to restore and maintain other natural barriers such as dunes, beaches, and barrier islands should be continued.

For animals and plants that may not be able to adapt very quickly, it is essential to acquire more conservation lands inland to allow them to migrate away from the sea. This approach will give these species more time to adapt and live for longer periods under conditions to which they have been accustomed.

## Why North Carolina?

Besides being valuable as a global climate change adaptation laboratory due to the actual threats it faces, the Albemarle is also an ideal location for conservation efforts because over 540,000 acres are already in conservation hands. Adaptation plans can be implemented and tested on a landscape scale with only thirteen primary land managers. Professional management is in place to oversee projects and carry out plans in an organized fashion. Additionally, millions of dollars of state, federal, and private funding contribute to conservation activities, which can be dedicated in part to adaptation plans.

As recognition has grown in recent years about the need to address climate change, many U.S. states have begun to act with urgency. Several states have put together goals for greenhouse gas reduction and have begun to explore ways to cope with other impacts of climate change. As state officials learn more about problems and potential solutions, more funding for adaptation plans will become available. Conservation groups, government officials, and private citizens must work together to create efficient and effective plans for climate change adaptation. With more funding, these crucial projects can get underway sooner and provide a greater chance for successful protection of environment and property. Through understanding sea level rise and how landscapes change in the conservation community, lessons can be communicated to other private and public landowners.

**Lindsay Wilkes** is an associate at Horsley Law Firm in Raleigh, North Carolina. **Tom Cors** is a government relations representative for the North Carolina Chapter of The Nature Conservancy.

### BACK ISSUES

Back issues of this newsletter can be viewed on the Climate Change, Sustainable Development, and Ecosystems Committee Web page at <http://www.abanet.org/enviro/committees/climatechange/newsletter/archiveslist.html>.

## ECOSYSTEM-BASED MANAGEMENT AND TRADITIONAL PROPERTY RIGHTS: SOME LEGAL AND POLICY ISSUES FOR CONSIDERATION

---

**Chad J. McGuire**

### Introduction

Ecosystem-based management has become a recurring theme in the pursuit of sustainable practices, especially considering common resources. While science has developed strong disciples of ecology and conservation biology to arm resource managers with better information on where priorities should be set, our legal and policy institutions need to develop management tools that better resemble ecosystem principles. One such legal institution in need of analysis is the manner in which we define property rights. Much of traditional property rights have focused on the notion of *human entitlement*, looking at property interests as a means of satisfying some human use. This article suggests we begin to review ecosystem management through the legal lens of *human requirement* to better incorporate how ecosystems function, and the value they serve to human well-being. A *human requirement* perspective would take a broader view of property “value” and expand the regulatory capacity to include more objectives, including those aimed at maximizing ecosystem management without invoking constitutional protections.

### Traditional Property Systems

In the United States, we have developed a property regime that is fundamentally separated into two large categories: public and private. Public property interests are identified and managed based on current social values expressed through preferences, which are subject to change through the democratic process. Examples of different preferences on public lands include: national parks, wilderness areas, forestry lands, marine protected areas, and national monuments. While changes in our preferences are accepted (consider the debate surrounding the Arctic National Wildlife Refuge), the environmental

consequences of a change in preference must be fully considered (*see*, 42 U.S.C. 4321, *et seq.*, the National Environmental Policy Act). This can be a benefit where property has been preferentially selected for its ecological values, especially within the public setting.

Private lands are a mixed bag when it comes to linking traditional property rights and protection of ecosystem values. Our laws relating to private land were not developed with a full understanding of the values inherent in ecosystem services (see the works of John Locke as one example). Moreover, private land derives much of its “value” (and thus desire to be appropriated through private expenditure of capital) because it can be put to “use” in an industrial or free market sense of the word. Ecological economists understand user(s) of private land generally focus on the *direct use* portion of “value,” with less attention being paid to the *indirect* and *non-use* values that a given piece of land might hold. There are examples of landowners who buy private land simply to maintain *indirect* and *non-use* values (The Nature Conservancy, for example), but such acts are more the exception than the rule. Finally, even where private land is found to have extensive ecosystem values, there are constitutional limits on how far the public can go to protect such values, without directly paying for the good itself (*see generally*, *Lucas v. South Carolina Coastal Commission*, 505 U.S. 1003 (1992)). Thus, there are practical limitations to protecting ecosystem services in the private property setting.

## Property Law and Ecosystem Types

Aside from the challenges posed by traditional property law systems, ecosystem-based management also requires a closer understanding of the ecosystem at issue. Broadly speaking, ecosystems can be separated into two categories: ***naturally occurring*** and ***human-supported***. Naturally occurring ecosystems may be defined as ecosystems that exist without direct human influence. Human-supported ecosystems may be defined as ecosystems that have developed as a direct result of human influence. An example of human-supported ecosystems was described this past February 2008 at the ABA Section of Environment, Energy, and Resources’ annual Water

Law Conference held in San Diego, California. The human-supported ecosystems at issue were those that have developed around dam projects. The issue focused on older dam removal (especially around the Northeast region of the United States), and the need to consider the ecosystem that had developed as a result of the dam’s existence. Removing the dam had consequences for that ecosystem, which “muddied” the argument that dam removal was always a superior alternative for natural settings.

The issue to highlight here is not all ecosystems exist because of natural influences. Human manipulation of the environment has spurred adaptations, and thriving ecosystems have developed as a result. Thus, in some cases, maintaining human influences (dams for example) can be critical in supporting ecosystem services, at least in the case of human-supported ecosystems.

Property systems are a factor to consider when determining the type of ecosystem at issue. Naturally occurring ecosystems may benefit from public support because they generally occur in areas that have been mostly untouched by human influence. Public control mechanisms may be the superior tool for protecting such resources. Alternatively, human-supported ecosystems may require less public regulation, depending on the manner in which the property is used, and the connection of that use to the ecosystem’s creation and support. Indeed, a certain level of continued human influence may be required for ongoing support and maintenance of human-influenced ecosystems. So, it is not only important to understand how property laws might affect a given ecosystem management regime, but it is also critical to assess the *type* of ecosystem at issue, because it may require different levels of human interaction to ensure its continued existence. For ecosystems developed around human interaction, less regulatory control may be necessary.

## Changing the Basis of “Entitlement” under Traditional Notions of Property

Ecosystems are a difficult concept to understand fully, and they frustrate our common legal traditions. For one thing, it is incredibly difficult to define the boundaries of

an ecosystem. Also, even if boundaries can be defined, they are subject to change based on a number of factors, both natural and human-caused. This reality of ecosystems creates substantial impediments to the very notion of “management.” Current traditions of property law offer additional impediments. For example, consider the use of eminent domain by the state to properly regulate ecosystem services. Assume science has identified an area as exhibiting important ecosystem functions. The area includes undeveloped private lands. Under a *Lucas* analysis, we know a legal challenge is likely if the public entity wishes to restrict any development of the property (certain assumptions are being made here regarding the property owner’s rights, expectations, and development interests). After consideration, the public entity chooses to protect the ecosystem services through eminent domain (assuming protection of ecosystems is considered a “public use”), and pays fair market value for the property. Now, what happens if the ecosystem boundaries change? What if changes require the purchase of new private lands? What if the already-purchased lands no longer contain ecosystem services? Is the constant purchase and selling of property rights under an eminent domain regime the most efficient way (socially or economically) of dealing with the protection of ecosystem services? Many would think not. So, what can the law offer in helping to resolve this problem?

One way of looking at the issues raised above is to differentiate property based on notions of *entitlement* and *requirement*. Under our system of property law, humans are *entitled* to the general use of property with exceptions (zoning and nuisance laws provide examples). Socially accepted limits may be seen as *requirements*, or conditions, placed on real property. The U.S. Supreme Court in *Lucas* specifically excluded from a regulatory taking the kinds of regulations that enforce public nuisance-type actions, since a landowner never maintains a right to engage in a public nuisance on one’s property (*Lucas*, 505 U.S. 1003, 1048-1050).

For ecosystems, there has yet to be created a nuisance-type limitation that prevents the use of private property in a way that is harmful to the ecosystem. What would likely be required for such a limitation are

two things. First, ecosystem services would have to be seen as an essential human requirement, the destruction of which would be equivalent to a harm on the same level as a public nuisance. If ecosystem health were seen as essential to human health, then public protection of such an important resource would likely be much easier. Second, science would have to come up with a readily available system for identifying ecosystem services that are the functional equivalent to basic public health requirements. Without a reliable identifier, we will likely remain unable to discern one area of land with little ecological value from one that has ecological value important for human well-being. This will frustrate public protection of private property interests, and invite constitutional takings challenges.

At the heart of an *entitlement* versus *requirement* discussion is a change in perspective. Where one views ecosystem services along a spectrum depends in large part on the person’s value system. It is quite logical to assume not all ecosystems are created equal, and some are more important than others (think biological hotspots), at least so far as humans are concerned. I would argue a change in the way of seeing property rights, from entitlement to requirement, is an important first step in the transition to ecosystem-based management of land, especially private lands. In the past, people were willing to question the public authority to zone private property (*see, Village of Euclid, Ohio v. Amber Realty Company*, 272 U.S. 365 (1926)). This is no longer the case, and private citizens are more accepting of zoning and land use requirements. While it may be possible to zone certain areas based on ecological considerations for future development, current private property interests must be resolved. The foundation of this struggle lies in the public’s valuation of ecosystem services. Focusing on the *requirements* of ecosystems, their links to real property values, and the connection to human well-being will be important steps in the future to establish a legal regime for ecosystem-based management that is both socially and economically efficient.

## Conclusion

Ecosystem-based management is at the epicenter of efforts to develop and maintain sustainable practices.

There are fundamental challenges to fulfilling an ecosystem management mandate. Specifically, ecosystem management must fit within our existing jurisprudence of property rights. There are practical limitations to creating lasting ecosystem management protections due to the manner in which public and private property rights are established. There are a couple of reasons for these limitations. First, ecosystems are hard to define. They are dynamic, and can move spatially and temporally. Second, they can be created and maintained both naturally, and as a result of human intervention. Where ecosystems are found on private property, constitutional limitations can prevent an efficient management of such resources, even assuming the public has established a preference for the ecosystems protection.

One way of potentially resolving traditional property rights and ecosystem management is to alter the perspective of property rights from human entitlement to human requirement. Under a human requirement scenario, ecosystem values can be given priority where they are seen as essential for human well-being. By doing so, the modification of ecosystems can be likened to a public nuisance, and private actions may be more capable of regulation without treading on constitutional rights. However, public actors need to be wary of the manner of ecosystem creation (natural versus human creation) since continued human interaction may be necessary in some instances for ecosystem support and maintenance.

**Chad McGuire** holds a J.D. from Thomas Jefferson School of Law, an LL.M. with concentration in environmental law from the University of San Diego School of Law, and is currently a Ph.D. candidate in Environmental Science at the University of Massachusetts, Boston. He can be reached via email at: [cmcguire@umassd.edu](mailto:cmcguire@umassd.edu).

## WHAT TOMORROW'S LEADERS ARE UP TO TODAY: A SNAPSHOT OF LAW STUDENTS DRIVING CLIMATE AND SUSTAINABILITY SOLUTIONS

---

**Dan Worth**

Across the country, attorneys, law firms, and their clients are preparing for what may be a flood of climate litigation, legislation, and policy in the years and decades to come. Law firms have set up specific climate practice groups, and companies, governments, and non-profits are going green. Everywhere, today's leaders are preparing for a carbon-constrained future.

The long march to greenhouse gas (GHG) reductions, however, will be led by generations of young attorneys who have yet to bill an hour. These future attorneys, who have an average age of about 23 years old, will retire around 2050. By then, a vast majority of the world's best scientists predict we will need to have cut GHG emissions a full 80 percent. Combine this recommendation with a growing global population and you have 9 billion people in 2050 who will have to cut their per capita emissions to about one seventh of current levels.

But fear not! To the rescue come today's visionary law students and law schools who are already learning, training, and advocating new paths before they even enter the workforce. So even as this newsletter continues to report on progress in the law and policy fields at the professional level of the legal practice, we must look to today's law students and law schools to get a real sense of the leaders who will drive major, aggressive, current and future action.

### **A Growing Movement in the Green Mountain State**

South Royalton, Vermont, is a small city nestled in the picturesque, relatively undeveloped White River Valley. According to its Web site, "Royalton is a town with a proud heritage and a bright future. Its buildings, its landscape, and its people reflect both an appreciation of the past and an abiding hope in tomorrow." At Vermont Law School (VLS), a group of exceptional

students and visionary professors are leading the charge to realize the town's hope in tomorrow, today.

This past March, the next generation of environmental attorneys, CEOs, executive directors, entrepreneurs, and policy wonks descended on Burlington and South Royalton for "Picking Up the Pieces," the 2008 National Association of Environmental Law Societies (NAELS) Conference hosted by the University of Vermont, VLS, and the Vermont Environmental Law Society (VELS).

Lead organizers Laurie Wheelock, Thad Atkins, and Jane D'Antonio, led VLS students and a VELS team in bringing together 250 attendees from more than thirty law schools and a host of professionals from across the environmental law and policy spectrum. Highlights included a Natural Resources Defense Council Reunion Dinner attended by founders John Adams and Richard Ayres, a reception hosted by Ben & Jerry's, and a stirring keynote address by Sen. Bernie Sanders on the role of the United States in leading the globe toward a bright energy and climate future.

One of the work sessions at the Solutions Conference on Saturday was titled Campus Climate Neutral (CCN) and featured the work of the recently formed VLS Carbon Reduction Task Force (CRTF). The 2007-2008 CRTF consisted of four inspired law students who dedicated much of last year to developing recommendations for transforming the 13-acre VLS campus to modify its buildings, transportation networks, and energy purchasing over the coming decades. Caitlin Balch-Burnett, Lisa Campion, Mary Johnson, and Sandy Marks proposed and fulfilled a one-year work-study program, under the supervision of Vice President of Finance Lorraine Atwood, and compiled an impressive report and a list of recommendations to achieve campus "climate neutrality."

From local progress to state, national, and international work, the new VLS Institute for Energy and Environment (IEE), run by Michael Dworkin, is leading the way. According to the IEE's Web site: "The Institute for Energy and the Environment serves as a

resource on energy law and policy. The Institute distributes scholarly, technical, and practical publications; provides forums and conferences for professional education and issue development; and serves as a center for graduate research on energy issues, with an environmental awareness."

As just one example of the IEE's impact, this summer the IEE will bring together some of the nation's leading experts—Stuart Caplan, of White & Case, LLP; Paula Gant, the VP of Regulatory Affairs for the American Gas Association; David Hamilton, director of the Global Warming and Energy Program for the Sierra Club; and Steve Weissman, associate director for Energy Law and Policy at the California Center for Environmental Law and Policy at UC-Berkeley—to allow the next generation of leaders the chance to work with these experts to envision a bold, new, low-carbon United States of America.

## **A Mass Power Shift**

In the late 18th century, the state of Massachusetts became famous for its revolutionary stance against England, driving the process to declare political independence for the state and the young colonies. Three hundred years later, students and young folks are leading an even more revolutionary Mass Power Shift to get the state to be *the* leader in combating climate change, through new, ground-breaking legislation.

According to the director of this project, Craig Altemose, who serves as one of the 2008-2009 co-chairs for NAELS, this effort, replicated across the nation, could have profound results:

"In every great movement of the 20th century, the youth have led the way. There is no greater concentration of students than in Massachusetts, and no state better known for its leadership across the history of our great nation. . . . It's no surprise then that the greatest challenge facing our civilization counts among its leaders hundreds of impassioned students in Massachusetts, working with community members to do but what is necessary for a just and sustainable future."

This past fall, these students brought together the best and brightest to plan a long-term shift away from fossil fuels and an equitable distribution of the windfall that they believe will come from going green, by supporting the Global Warming Solutions Act and “green collar” jobs legislation. Massachusetts Sen. John Kerry and Rep. Ed Markey spoke at the event and gave this generation some encouragement that change is coming, and that they ought to be leading the way.

### **Focusing the Nation in Maryland**

Just north of the nation’s capital, Environmental Law Program Director Laura Mrozek along with Professors Robert Percival, Lisa Heinzerling, Rena Steinzor, and others, have helped the Maryland Environmental Law Society (MELS) lead national environmental law student efforts for years. To celebrate the 20th Anniversary of the Environmental Law Program, the MELS purchased 450,000 pounds of carbon dioxide offsets, making the 2007 Ward Kershaw Environmental Law Symposium “carbon neutral” by offsetting the 67,000 pounds of carbon dioxide that were emitted by the airplane travel of the symposium participants, and leaving an additional 380,000 pounds of carbon dioxide offsets invested in industrial efficiency and renewable energy projects such as wind farms.

On Jan. 31, 2008, the MELS brought together educators, policymakers, activists, and stakeholders to concentrate on climate solutions in a national teach-in called “Focus the Nation.” Students celebrated Focus the Nation through a series of panel discussions. The event attracted distinguished panelists from different quarters of the climate policy field, among them keynote speaker, Maryland Secretary of the Environment Shari Wilson. During the symposium, four panel discussions provided an opportunity to involve the student body and community members in the conversation. The conference itself was green, with the “Focus the Nation” banner made out of recycled materials and the lunch catered by local organic farmers and eaten with biodegradable utensils.

Finally, harnessing the energy of Focus the Nation, members of the MELS joined with other graduate

students across the various schools on the University of Maryland, Baltimore (UMB) campus to create the Maryland Student Climate Coalition (MSCC). On Feb. 15, 2008, the MSCC presented over 11,000 student, staff, and faculty signatures, plus the endorsements of school presidents, deans, directors, faculty and staff senates, and student organizations from campuses across the state to the Board of Regents asking them to support Chancellor Kirwan in his environmental initiatives plan. The campus is now developing a system of committees with the task of evaluating and initiating sustainable policies to reduce UMB’s carbon footprint based upon the principles outlined within Chancellor Kirwan’s Sustainability Initiative. Students will be given official seats as representatives on those committees, empowering them to have a voice in changing UMB’s impact on the climate. Recently, David J. Ramsay, president of the University of Maryland, Baltimore, signed the American College and University President’s Climate Commitment, a pledge to take immediate steps to reduce GHG emissions with a long-term goal of going climate neutral.

### **How a Legal Conservation Clinic is Driving Southern Climate Neutrality**

In Gainesville, the University of Florida dominates the city. So when the school signed onto the President’s Climate Commitment, which involves a pledge to go “climate neutral,” it was a huge step that will send ripples across the campus and state.

At the University of Florida Levin College of Law, professor and NAELS Board of Directors member Tom Ankersen, who is the director of the school’s Conservation Clinic, sees a role for lawyers and students to be a central part of the future. According to the director, the “clinic represents an effort to focus interdisciplinary applied education on the compelling conservation challenges of our times. Students from the College of Law and relevant departments within the graduate school work in teams with clients in the governmental, non-governmental and private sector to advance local, state, national and international conservation objectives through the programs, projects and initiatives described here.”

Recently, in a new focus area, Campus and Community, the clinic launched a campus sustainability project to make recommendations on obtaining climate neutrality on campus. Bravely stepping in to figure out exactly what climate neutrality means is a graduate student, Brian Becker. Brian's clinical assignment was to develop a set of recommendations for the recently minted Campus Master Plan to accelerate greenhouse gas reductions. The final 23-page report (available online at [http://www.law.ufl.edu/conservation/projects/pdf/UF\\_carbon\\_neutral\\_master\\_plan\\_review.pdf](http://www.law.ufl.edu/conservation/projects/pdf/UF_carbon_neutral_master_plan_review.pdf)), has met with some resistance (try adding an external, radical new element to an extensively reworked Campus Master Plan), but the data collected for the project, the recommendations, and the energy of the student and professor who created them will certainly impact and inform a difficult, long-term process for many years to come.

### **Global Warming and Human Rights in the Pacific Northwest**

On the opposite side of the country, there is a Human Rights catastrophe coming to the Pacific Northwest in May, 2009, that will impact the Arctic, Africa, low-lying Pacific nations, and North and South America! Well, maybe not yet, but, for planning purposes, what if there were?

That is the extremely difficult question that environmental and human rights attorneys will consider at the University of Washington, May 21-22, 2009. According to organizer and NAELS Washington Representative Jennifer Marlow, "Market-based solutions to climate change are popularly promoted but fail to completely address the humanitarian emergency at the heart of our climate crisis. Without legal remedies to help level the playing field, the fundamental rights of people who lack both political power and economic autonomy will be imperiled.

"The legal community is in a unique position to spearhead innovative solutions to climate change to account for the basic protection of fundamental human rights. The Law of Climate Change and Human Rights Conference at the University of Washington, Seattle, will bring legal practitioners and scholars together to discuss the application of human rights law to the

impending climate crisis. Numerous legal scholars have suggested that human rights law may be the most adequate and responsible remedy for climate-related impacts, and this conference will provide an international forum to thoroughly test the available remedies and collaborate over necessary advancements in the law."

The conference will look "through the lens of a fictitious disaster scenario" and "offer an opportunity for creative problem-solving and solution-oriented collaboration for lawyers and scholars engaged in the historically separate fields of environmental and human rights law. The conference will examine climate impacts on peoples from four global regions: the Arctic, Africa, low-lying Pacific Island nations, and North and South America. Panels will address topics such as the forced migration of climate refugees, the role of ethics in post-Kyoto treaty negotiations, and national security issues, as well as mitigation strategies for the health and security of indigenous peoples. For more information, please contact: [climateconference2009@gmail.com](mailto:climateconference2009@gmail.com)."

### **Rocky Mountain High Level Energy Work**

At the University of Colorado-Boulder School of Law's recently founded Energy and Environmental Security Initiative (EESI), former NAELS Governing Board member Kevin Doran and visionary Professor Lakshman Guruswamy are leading law students on an interdisciplinary mission to use innovative legal and policy solutions to address global warming and energy security through several high-level national and international, real-world, interdisciplinary projects.

"What we do," explains Kevin, "is help students see the impact of law on all the areas where progress is needed. Whether you're talking about basic science, applied R&D, market development and so forth, law either expands or contracts the universe of possibilities. Our students learn that good legal solutions can't be devised in the abstract. They need to be informed by the very environments and processes they're meant to deal with." Professor Guruswamy puts it this way: "We show students how to use law as instrument for profound social change. We show them what the law can really do."

Outside of the EESI, the law school is buzzing with student activity. According to Alison Flint, the school's Environmental Law Society (ELS) "kicked things off on Jan. 31 with Focus the Nation, the national climate change awareness day in which over 1,900 institutions participated. Vickie Patton, Deputy General Counsel at Environmental Defense, delivered a fantastic talk on the dynamic legal landscape of climate change and the urgent race for law to prevent global warming."

On a campus level, Alison reports that the school's "ELS recently secured a \$41,000 grant from Sustainable CU: The Environmental Improvement Initiative to have a 10 kilowatt solar panel array erected on the roof of the Wolf Law Building by this summer. We are excited to improve upon the Building's LEED Certified Gold Status by adding green electrons to the mix. The project will also include an educational component, with information about the panels and a green energy meter displayed on the kiosks throughout the law school. The solar panels are just one element of ELS' Green Standards Initiative, under which ELS is working with the Dean's Office and Facilities Management to implement various design, operations, events, purchasing, communications, transportation, and grounds standards and policies in an effort to achieve long-term goals of zero-waste, carbon-neutrality, and environmental awareness.

The Green Standards Initiative also includes an outreach component, for which the ELS hosted a NAELS Regional Event in June to discuss strategies and approaches for creating more sustainable learning environments with our peers from other law schools in coordination with the NRLC's Summer Conference."

## Conclusion

The combination of the impending climate crisis, the open source data now available on the internet, and the academic freedom today's students have to work on real-world solutions through clinics, externships, internships, and directed research projects has combined to create a fertile environment for the next generation to push forward revolutionary climate solutions.

On average, today's law student will hit retirement age in 2050. That leaves forty-two years for their generation to retrofit 107 million U.S. households and build 50 million more; transform the commercial and industrial sectors; and find massive, low-cost, low-carbon transportation solutions. Although litigation may help push energy companies, auto companies, and others to move faster, it is only a small part of an all-encompassing solution.

If you are a student reading this, please consider connecting to NAELS to become a part of the revolutionary projects going on across the country and around the world. If you are a professor, professional, or alumni reading this, I have two words for you—"free labor!"

That's right, there are hundreds of students in today's law schools with thousands of hours to spend on real-world climate solutions, saving campuses, cities, state, companies, and organizations many dollars in consulting work. Find them and engage them, and in addition to getting some low-cost hands involved in your projects, you will be training a new generation of leaders who are already leading the way today.

**Daniel Worth** is a former Harvard Law School Environmental Law Fellow, the executive director for the National Association of Environmental Law Societies (NAELS), and the co-founder of Campus Climate Neutral (CCN) and the Modern Industrial Revolution Project (MIR Project). He can be reached at [executivedirector@naels.org](mailto:executivedirector@naels.org).

## LIKE TO WRITE?

The Climate Change, Sustainable Development, and Ecosystems Committee welcomes the participation of members in preparing this newsletter. If you would like to lend a hand, please contact Gabriel Calvo at [Gabriel.Calvo@ngc.com](mailto:Gabriel.Calvo@ngc.com).

**FROM ABA PUBLISHING AND THE SECTION OF  
ENVIRONMENT, ENERGY, AND RESOURCES**

---

# **Global Climate Change and U.S. Law**

## **Michael B. Gerrard, Editor**

Because global climate change presents extraordinary challenges to the environment and the economy of United States as well as those of other nations, the debate about how to effectively implement more climate-friendly policies is sure to continue and amplify. The scientific case for strong action is becoming more compelling every month, and opinion polls show that the American public increasingly agrees. The law will play an important part in developing mechanisms to protect the climate, such as conserving energy, using renewable sources of energy, and implementing emission caps and trading programs.



*Global Climate Change and U.S. Law* provides comprehensive coverage of the country's law as it relates to global climate change. After a summary of the factual and scientific background, Part I outlines the international and national legal framework of climate change regulation and associated litigation. Part II describes emerging regional, state and local actions, and includes a 50-state survey. Part III covers issues of concern to corporations, including disclosure, fiduciary duties, insurance, and subsidies. Part IV examines the legal aspects of efforts to reduce greenhouse gases, such as voluntary efforts, emissions trading, and carbon sequestration. *Global Climate Change and U.S. Law* includes key resource aids, including a glossary of climate related terms; a list of acronyms; extensive endnotes; and a comprehensive index.

2007 784 pages 7x10 paperback

Product Code: 5350156

Regular Price: \$59.95

Section of Environment, Energy, and Resources Member Price: \$49.95

**TO ORDER ABA BOOKS, CALL 1-800-285-2221 OR  
VISIT THE ABA PUBLISHING  
WEB SITE AT [WWW.ABABOOKS.ORG](http://WWW.ABABOOKS.ORG)  
QUESTIONS? E-MAIL: [SERVICE@ABANET.ORG](mailto:SERVICE@ABANET.ORG)**