

DUKE ENVIRONMENTAL LAW

Fall 2008

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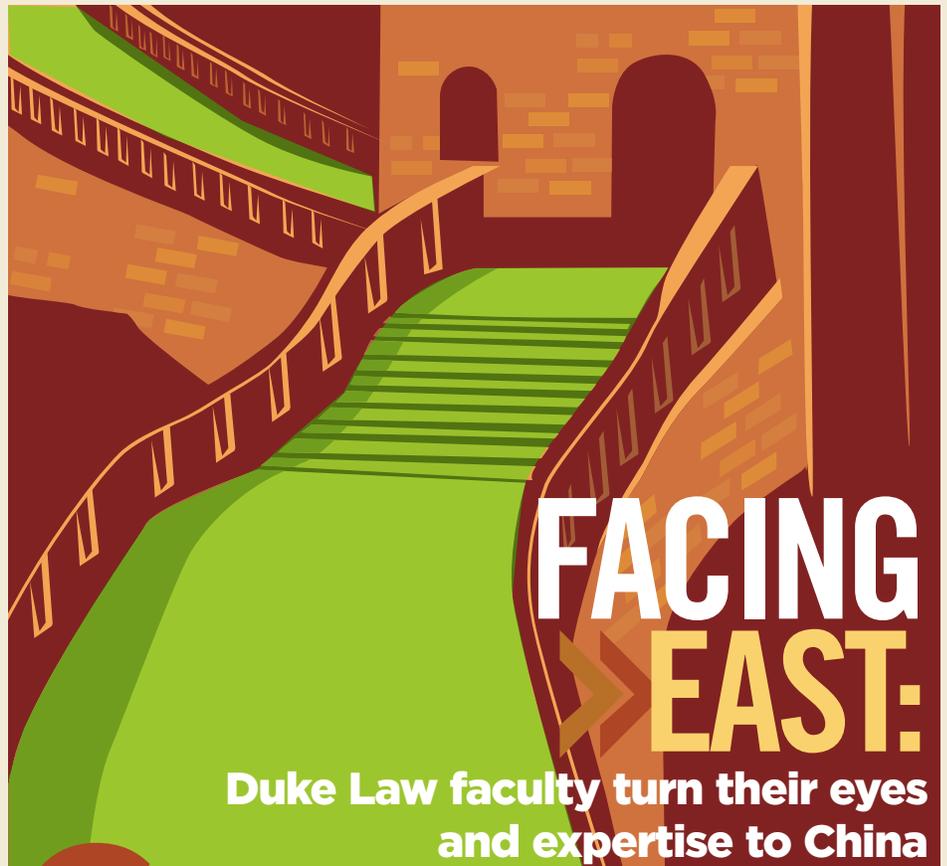
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Duke Environmental Law is published under the auspices of the Office of the Dean, Duke University Law School, Science Drive and Towerview Road, Durham, NC 27708

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CHINA HAS EMERGED on the world stage as an economic power and as a world-class polluter. The country is now grappling with how environmental policy might be improved to counter problems caused by its explosive economic growth and the resulting demographic shifts, increases in energy consumption, and demands on its natural resources. At the same time, world leaders hoping to curb global warming are looking for ways to engage China in an international climate regime.

“For an increasing number of environmental issues, as goes China, so goes the world,” observes Duke Law School's James Salzman. That's why Professor Salzman, Professor Jonathan Wiener, and others in the Duke Law community are focusing their expertise on China's environmental challenges.





James Salzman: Aiding China's macro-environmental strategy

CHINA'S remarkable economic growth in recent years has come at a high cost in terms of environmental degradation. One sign that the senior leadership is taking the environmental threats to social welfare and public health seriously is its recent elevation of the State Environmental Protection Agency to the Ministry of Environmental Protection. Professor James Salzman has joined a team of international environmental experts helping the ministry establish long-term goals to improve environmental protection and governance. Their final "Macro-Environmental Report" will comprise an official strategy distinct from China's standard five-year planning horizon.

Duke's Samuel F. Mordecai Professor of Law and Nicholas Institute Professor of Environmental Policy, Salzman is contributing to the ministry's report in the areas of air pollution, water, natural systems and public lands, and governance, through a project sponsored by the Asian Development Bank. His task for the project is twofold: synthesizing the findings and discussions of international experts working on the project into broad recommendations for the ministry, and writing case studies on common themes that have come up in the different areas under consideration. To that end, he's written case studies on such issues as monitoring, citizen participation, and enforcement, among others.

"In any country, one of the big issues is which environmental strategy to favor," he says. "Should it be a strategy of sanctions? One of facilitation? To what extent should criminal sanctions be used?" Another case study explores the U.S. experience — and its patchy record — of taking enforcement actions against government-owned enterprises and activities, such as water treatment plants, when they fail to comply with state or federal regulations. Still another addresses models and strategies for gathering and sharing information relating to a pollution event.

"Most countries have monitoring stations that track air and water quality, but they are expensive to operate and generally don't capture specific events and pollutants," says Salzman. "A very interesting development that started in the U.S. and has spread to a number of other countries, is reliance on citizen and community groups to collect this information." One initiative involves giving a bucket with

U.S. standards, but a lot in a developing country. And the lab work is expensive. Still, there could be a Chinese variant on the bucket brigade that is useful.

"We are not trying to tell the Chinese what to do, but are offering examples of how other countries have dealt with these challenges," Salzman points out. "They are endemic to environmental protection. The main goal with these case studies is



MAY 2008 MEETING OF INTERNATIONAL ENVIRONMENTAL EXPERTS IN BEIJING.



which to gather air samples to residents of "fenceline communities" near refineries and chemical plants, he says. "If the members of these neighborhood 'bucket brigades' suspect there has been a pollution incident, they use the bucket to take samples and send them to a lab for testing." That may help officials know where to focus their monitoring efforts.

"There are reasons that may or may not work in China," notes Salzman. "The buckets cost about \$75 — not a lot of money by

to offer models that provide some useful insight into what might work — or, equally important, what might not work — in the Chinese context." China's challenge is unique, he adds. "No country has ever tried to create significant environmental protection measures in the face of such rapid economic growth."

Salzman calls his involvement with the Asian Development Bank project "a great opportunity," and praises the full engagement of Chinese environmental officials with the experts' series of three meetings in Beijing. "There are already a lot of sophisticated environmental policy instruments in place around China," says Salzman. "That said, there also is a lot of international experience. Chinese officials are smart to try to learn what they can from others' successes and failures." ♣



POLLUTION IN GUANGZHOU, CHINA

Jonathan Wiener: Engaging China on climate policy



JONATHAN WIENER has long been active in crafting strategies for effective climate policy, including how best to tackle the climate problem on a global scale. “Any effort to reduce greenhouse gas emissions to prevent future climate change must engage both the United States and major developing countries — especially China, as well as India, Brazil, Indonesia, and others,” says Wiener, the William R. and Thomas L. Perkins Professor of Law, Professor of Environmental Policy, and Professor of Public Policy Studies. He has written extensively on designing climate policy to engage major developing countries and has convened several international conferences on this challenge, including one at Duke in 2003 and one held last October in Paris.

Wiener’s latest work, published in the *UCLA Law Review*, focuses on strategies for engaging China. A country’s choice to engage in international cooperation depends on both its external incentives and its domestic political and social circumstances, Wiener observes in “Climate Change Policy

and Policy Change in China.” He argues that the time is ripe to bring China into an international climate regime. China has been reluctant to limit its greenhouse gas emissions, both because of economic cost, fairness, and because earlier studies had suggested that Chinese farming might benefit from global warming, explains Wiener. But China would be more amenable

“CHINA AND THE UNITED STATES WILL ALMOST INESCAPABLY EACH INSIST THAT THE OTHER ALSO ACT. THERE IS AN OPPORTUNITY HERE FOR A U.S.-CHINA PARTNERSHIP TO STRUCTURE THE COMING WORLD ORDER — ON CLIMATE, TRADE, SECURITY, AND OTHER GLOBAL PRIORITIES.” — PROFESSOR JONATHAN WIENER

to joining an international climate regime today than it was a decade ago, he says. Domestic factors favoring action include new scientific research on the worsening impacts of climate change to China, some by its own scientists; the public health co-benefits to the country of reducing other kinds of pollution along with greenhouse gas emissions; and the distribution of climate impacts within China amidst growing stresses across its regions and its socioeconomic groups.

“Even if China was not concerned

about global warming hurting its coasts or agriculture — which newer studies suggest are more at risk than earlier studies had forecast — the Chinese leadership is concerned about political upheaval. Climate change could plausibly aggravate political instabilities in China,” Wiener says. “Environmental activism is growing in China. And there is a long

history there of public attitudes linking extreme weather events and disasters to dynastic change and even revolution.” Wiener credits his research assistants from China, including Xin Dai ’09, and Professor Jonathan Ocko, who teaches Chinese Law and Society, for pointing him to these aspects of Chinese history and philosophy.

Meanwhile, externally, China’s emerging status as a great power may change the perception among its leaders of their responsi-



bility to help solve a global problem, and their rewards for doing so, Wiener maintains.

“China may be starting to care more about the impacts of climate change not only to itself, but also to other major developing countries that are its allies and trading partners, in Africa and Asia, for example. There is some evidence that China



took measures to help stabilize Asian currency markets during the financial crisis of the late 1990s, at some cost to itself, because it saw itself as a regional leader. As China becomes a global power, it may shoulder more of that kind of leadership.”

Further, the design of the international treaty regime affects countries’ incentives to join. A cap and trade system should be the centerpiece of an international treaty to engage China, Wiener suggests. “In such a system, emissions are cut, costs are kept low through trading, and the allocation of emissions allowances can give China a valuable commodity to sell to countries where emission reductions would otherwise be

more costly.” That’s the “carrot” successfully used to engage reluctant parties in the U.S. Clean Air Act acid rain program, the Kyoto Protocol, and the European Union emissions trading program, he notes.

The coming year will be crucial for climate policy, says Wiener, because negotiations on “post-Kyoto” climate commitments are scheduled to be completed by the end of 2009, and the new U.S. presidency (and possible change in the Senate) in 2009 hold promise for new engagement by the United States.

Wiener stresses that China should not be expected to act first or alone on climate change, especially when the United States has not ratified the Kyoto Protocol. But he adds that neither is the U.S. Senate likely to limit emissions aggressively without some counterpart action by China. “China and the United States will almost inescapably each insist that the other also act. There is an opportunity here for a U.S.-China partnership to structure the coming world order – on climate, trade, security, and other global priorities.” ♪

Alumni Profile



Julian Wong
JD/MA '05

AFULBRIGHT SCHOLAR at Beijing’s Tsinghua University since February, Julian Wong is using his blog, “The Green Leap Forward,” to track, analyze, and assess developments in environmental policy and renewable energy in China. He is mining what he describes as an “endless” series of conferences and lectures in the city, meeting with policy makers and stakeholders, and voraciously tracking commentary in Asian and Western media.

“Beijing has become the center and focal point for renewable energy, energy efficiency, and energy issues in Asia, if not the world,” says Wong, who ties it to China’s ferocious economic growth of recent years. “Not only is the market huge, but the government is pretty well completely on board.”

That doesn’t mean that every official policy and pronouncement should be taken at face value, as Wong’s posts frequently point out. In one mid-August post, he questions “just how real” China’s renewable energy revolution may be. “It may be manufacturing a lot of cleantech goods, but the extent of domestic uptake leaves more to be

NEW PROJECT TACKLES INNOVATIONS IN ENERGY AND CLIMATE

A NEW PROJECT ON innovations in energy and climate, particularly as they relate to China and other developing countries, taps into Duke’s cross-disciplinary strength in intellectual property and environmental law and policy. Sponsored by Chatham House in London, the home of the Royal Institute on International Affairs, the project brings together Duke Law intellectual property experts Jerome Reichman, Bunyan S. Womble Professor of Law, and Arti Rai, Elvin R. Latty Professor of Law, along with Professor Jonathan Wiener (see main article) and Richard Newell, Gendell Associate Professor of Energy and Environmental Economics at Duke’s Nicholas School of the Environment.

“One part of the solution to global climate change is to put a price on greenhouse gas emissions through a tax or a cap and trade system. Another key part of the solution has to be to design incentives that will motivate the development and diffusion of new, climate-friendly technologies,” says Wiener. “But strong intellectual property rights, although a powerful motivation for the development of new technologies, sometimes also impede the diffusion of those same technologies. So this project explores to what extent this dilemma will afflict innovation in climate-friendly energy technology, especially in China.” ♪



desired. At the same time, the global supply chains face the increasing strain of sustained high oil prices,” he writes by way of introduction to a discussion of how China’s efforts to go green may be affected by “the end of cheap oil.”

For Wong, his year in China is a deliberate step towards a career on the “sustainability track,” holistically tackling environmental problems from multiple angles that include business and finance, in addition to law and policy. His decision to enter corporate practice at Paul Weiss in New York and Hong Kong following law school and specialize in private equity and mergers and acquisitions was a deliberate step towards the same goal for the Singapore native.

“Exposure to capital markets, finance, and business is crucial to understanding how the energy economy works,” he says. “Because energy is the biggest business in the world and a lot of energy decisions are driven by the private sector, familiarizing myself with how businesses operate and how money is raised struck me as not only educational — it was critical.”

“The Green Leap Forward” is Wong’s second blog; since 2007, he has also blogged on developments in solar energy technology in “The Solar Coaster.”

“In setting up my research interests, I identified solar energy as possibly the most promising technology and wanted to educate myself further about it,” explains Wong. “I thought the best thing for me to do would be to write down my thoughts and summaries of what I read. The blog serves as a log of my thinking and, because other people can read it, forces me to flesh out the issues precisely. It really imposes discipline.”

Wong’s interest in solar technology crosses over into his musings on China. In his June 17 entry he offers a “Preliminary Policy Prescription for Solar Adoption,” in China. While China is among the largest producers of solar photovoltaic cells in the world, he observes, it exports more than 90 percent of them — thus exporting a tremendous

The screenshot shows a web browser displaying the homepage of 'THE GREEN LEAP FORWARD 绿跃进'. The page has a navigation bar with 'Home' and 'About the Author' links, and a search box. Below the navigation is the site title and a tagline: 'Tracking the emerging technological, commercial, political and social revolution to green China's red-hot economy.' There are social media links for 'Feed on', 'Posts', and 'Comments'. A large image shows a group of people in a public square, with one person in the foreground holding a sign that says 'HAI'. Below the image is the article title 'Voices That Carry—Advocating for Carbon Caps in China' by Julian, dated Sep 9th, 2008. A sidebar on the right contains a section titled 'What is the Green Leap Forward?' with a brief description of the Great Leap Forward. A red banner at the bottom of the screenshot reads: 'SCREENSHOT FROM JULIAN WONG'S BLOG ON ENVIRONMENTAL POLICY AND RENEWABLE ENERGY IN CHINA. VIEW THE BLOG AT: HTTP://GREENLEAPFORWARD.COM/'

amount of clean energy potential. “It seems like such a wasted opportunity,” says Wong. “China has the potential to begin using more and more of what it produces. The challenge for renewable energy advocates is to accelerate that process.”

He also talks about “bottom up” movements in China as they relate to solar and other renewable forms of energy. Unlike wind-energy, which has been successful largely due to a top-down push, distributed solar power requires grassroots buy-in, he says. “Wind farms are not located close to urban areas. Some really top-down measures in government have pushed the industry and it results in this big wind boom that we’ve seen in the past couple of years.

“There are a lot more players and a lot more stakeholders involved [in solar power],” he says, “especially people on the ground — consumers, businesses, and industry — who would need to get on board to have solar panels put up on their property. That requires a lot more buy-in from all stakeholders, far more than you see with wind farms.” China needs this “bottom-up revolution” to truly move the economy and environment onto a cleaner path, he says.

In the short term, Wong is contemplating a transition into venture capital, so that he can participate “in the investment side of clean tech,” he says. “I’d like to help make investment decisions based on an analysis of the market and trends. It’s holistic and interdisciplinary and draws on all of my previous experience.” In the longer term, he anticipates getting more deeply involved in the social implications of how technologies are arranged.

“A purely technological approach has its limitations,” says Wong. “A lot of people are talking about how we can make our cars more green, more fuel efficient. But if you look at trends, [vehicle consumption] is going to grow rapidly in Asia and the way we design our cities, roads, and transportation systems are completely based on the use of the automobile. So you can increase efficiency, but all its benefits can be lost because overall automobile use has ramped up. Our cities are still very much arranged with the automobile in mind. Clearly, fuel efficiency isn’t the only consideration, yet, such technologies are touted as green solutions in isolation. There are fundamental design problems to how we live that must be addressed.”



Student Profile

Patrick Duggan JD/MA '10

PATRICK DUGGAN SPENT part of his 1L summer in Beijing, working for King and Wood, China's largest domestic law firm. Having the opportunity to research how different legal structures can be used to finance "clean development mechanisms" (CDMs) in China under the Kyoto Protocol was enlightening, says Duggan, who may make the mechanisms central to his thesis as he pursues a Masters in Environmental Science and Policy, in addition to a JD.

"Under the Kyoto Protocol, developed countries that find it too expensive to put in large 'green' energy plants — such as windmills, geothermal, or hydroelectric plants — can help finance similar projects in developing countries," explains Duggan. "They can use the offset credits to meet their minimum requirements under Kyoto. Approximately 41 percent of the CDM market is in China, where the law requires more than 50 percent of each project to be owned by a Chinese national. So there are issues of getting around some of the hurdles set for the CDM market by China, domestically."

Developed countries also aren't always fully aware of what they are financing through CDMs, Duggan learned. "From the outside, it looks phenomenal — Kyoto is promoting sustainable development in developing countries," he says. "But I learned that in the real world, it's not that straightforward. With the way politics works in developing countries, some of the numbers may be exaggerated to complete these projects, and developed countries are spending a lot of money to invest in something that may not be sustainable and doesn't produce the number of carbon credits they were initially promised."

Apart from gaining familiarity with the CDM market and opportunities for foreign



investment in renewable energy in China generally, Duggan appreciated the opportunity to be immersed in Chinese culture that his summer employment offered. Aiming to craft a career focused on "clean development" in developing countries — helping nations that lack infrastructure to develop it properly and economically without cutting corners — Duggan anticipates working in or with Asia in the future. He's wasted no time in getting started, spending July at Duke's Asia-America Institute for Transnational Law and even spending his 1L spring break in Tokyo at Waseda University's Transnational Conference on Environmental Law, an intensive, week-long course on comparative environmental law and policy.

"I learned that in some ways the United States is lagging behind other countries, but in others, such as the more administrative areas of environmental law, we are leaders," says Duggan. "You can get a sense of the good in each system and spot ways that you could incorporate the benefits of each different society's legal system to make a better one."

A summer-long tour of national parks when he was 12 sparked his keen interest in environmental issues, says Duggan, a native of Buffalo, N.Y. "When I got into college and saw a bit more of the world, I realized some of these areas were changing. It made me realize that I want my kids to be able to see the same things I

saw with my father, like the glaciers in Glacier National Park."

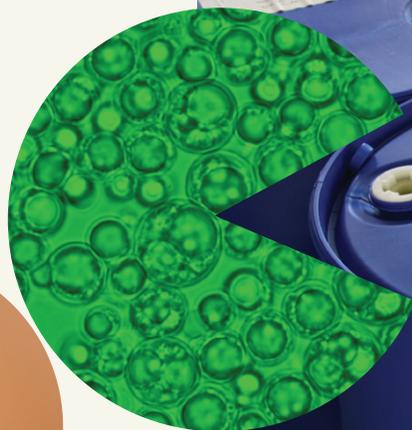
Duggan became an environmental consultant after graduating from Clarkson University with an engineering degree, working primarily with public institutions such as school districts and public universities to help them cut costs by making their operations environmentally friendly. He was working in Chicago and serving as a volunteer board member on the U.S. Green Building Council when he decided to make environmental law and policy his focus.

"I had been working with one school district in Western Illinois for more than a year and had a solution for [their problem] when the entire project fell apart," Duggan recalls, contrasting his frustration at the time with the success of a Council board colleague, a lawyer for the City of Chicago, in crafting a requirement that all new city buildings be at least "LEED Silver" certified. "By putting that policy in place he did more than I had been able to do in 13 or 14 months on the engineering side — with a lot less work and far greater sweeping impact," observes Duggan. "I decided that law was a better way to make an impact than following the orders of lawyers, which I was doing before."

Duggan chose to come to Duke for a dual degree because it offered the "best combination of law school and environmental school." In the current academic year, he is serving as president of the Environmental Law Society, where he is spearheading an alumni mentoring program, director of pro bono environmental projects, and as student liaison to the Energy Subcommittee of Duke's university-wide Sustainability Committee. Given the opportunities he has had to work on campus — and abroad, with the assistance of Duke Law's Office of International Studies — Duggan adds that Duke has far surpassed his expectations in terms of collegiality and opportunities for involvement with "the areas I really care about." ♪



Alumni Profile



Renewable energy entrepreneur

Harrison Dillon
'03

HARRISON DILLON'S COMPANY, Solazyme, made headlines last January when it test-drove a Mercedes powered by its algae-derived diesel fuel around the Sundance Film Festival in Park City, Utah. Since then, "Soladiesel™" officially met the American Society for Testing and Materials diesel standard, the European Biodiesel Standard, and the U.S. Military diesel standard — the first algal fuel to do so for any of these three standards — and Solazyme has partnered with Chevron Technology Ventures and others to develop its technology further.

Dillon, Solazyme's president and chief technology officer, hopes to be able to produce Soladiesel™ on a large scale and at a price competitive with fossil-based fuels within two or three years. But the San Francisco-based company he founded with a college pal six months after graduating from Duke Law "is well below the neces-

sary cost for a lot of other products that are going to make it to market before the large-scale transportation fuel," he adds.

"We are a renewable oil-production technology company first and foremost," says Dillon, who points out that Solazyme's technology can be used to make any product made with oil as a raw material, from diesel, jet, and home-heating fuel, to plastics, cosmetic ingredients, edible oils, and cleaning supplies.

Solazyme's unique process — featured in the Sundance award-winning documentary "Fields of Fuel" — involves growing algae in the dark and feeding them large quantities of carbohydrates, which they then convert to oil. It bypasses algae's natural process of converting photosynthetic energy to glucose, and then to oil for the purposes of storing energy, Dillon explains. "We use a combination of things like genetic engineering and fermentation processes similar to the way beer is brewed or ethanol is made. We optimize the oil-production process to get this stuff made at very high volume and low cost."

Using waste-stream cellulosic sugar as feedstock for the algae — everything from

wood chips and sawdust to corn stalks and molasses — helps minimize the carbon footprint involved in the manufacturing process and sidesteps criticism about a "food vs. fuel" trade-off that can be levied against biofuels like ethanol. "We don't use carbohydrates that compete with food," says Dillon. "Our technology can take a pile of sawdust and turn it into oil that can be used to make diesel fuel, or into a high-nutrition edible oil that can be used to feed people." Many people derive a high percentage of their daily caloric intake from cooking oil, which has tripled in price in the last few years, he notes.

"We can make food and we can make fuel. We built this company to solve problems."

The idea for using algae as a source of renewable energy first occurred to Dillon while he was pursuing a PhD in human genetics at the University of Utah in the mid-1990s. "The Human Genome Project was in full swing, but I wanted to use genetics for things that were a little more creative," he recalls. "I thought renewable energy sounded interesting." He "stumbled



IN THE SOLAZYME LAB. (PHOTO COURTESY OF SOLAZYME)

For more information: <http://www.youtube.com/watch?v=pyXk7Mk1mas>

across algae” while reviewing scientific literature to find out how biotechnology might be applied to renewable energy. But while he could see the potential in algae, he “didn’t think the technology was really there yet.” He realized that the technology *had* arrived when he read an issue of the journal *Nature* devoted to the Human Genome Project during his 1L spring break.

“I read all the highly technical stuff about how they cloned all these genes and how they organized it and the high-throughput robotics they used in order to systematically analyze an enormous amount of genetic information, and I realized that you could apply all of this to algae, if you chose to,” Dillon recalls with obvious excitement. Taking advantage of Duke’s interdisciplinary strength, he arranged to earn law school credit while “learning about algae” from a leading researcher, Duke biology professor Elizabeth Harris, now a member of Solazyme’s scientific advisory board.

Having entered law school specifically with a view to getting a “useful tool” to help two Silicon Valley novices launch a

biotechnology company — his co-founder, Jonathan Wolfson, serves as CEO — Dillon made that his focus during his 2L and 3L years at Duke Law.

“At the end of my first year, I sat down with Steven Schwarcz [Stanley A. Star Professor of Law and Business] and asked him what courses I should take to help me start a biotech company, rather than those he would recommend if I planned to become a patent attorney in a law firm,” says Dillon, who wrote Solazyme’s first — successful — patent application while a 2L and now manages the company’s legal affairs and intellectual property portfolio, in addition to his other duties.

Observing that crafting persuasive arguments is at the heart of everything he does in a start-up company operating in a capital-intensive area, Dillon adds, with a laugh, that he couldn’t have built his company without the skills he learned at Duke. “I don’t think people realize that when they say, ‘You’ve got a biotech company. Why did you bother going to law school?’” ♪

DUKE ENVIRONMENTAL LAW & POLICY FORUM

Oct. **24** Save the Date 2008

DELPF’s 2008 symposium:
“The Future Environmental Agenda: Environmental Law and Policy Issues Facing the Next President”

ENVIRONMENTAL LAW SOCIETY SEEKS ALUMNI MENTORS

The number of Duke Law students interested in going into environmental law grows each year, observes Patrick Duggan JD/MA '10, president of the Environmental Law Society. Finding an appetite for information on the field, Duggan and his ESA board colleagues have launched a project to match students with alumni mentors who practice in specific areas of environmental law and policy domestically and internationally. To find out more about the project, contact patrick.duggan@law.duke.edu. ♪



SUPERVISING ATTORNEY MICHELLE NOWLIN JD/MA '92 AND CLINIC DIRECTOR RYKE LONGEST

Environmental Law and Policy Clinic marks successful first year

AS A MEMBER of the inaugural class of Duke’s Environmental Law and Policy Clinic, James Toy ’08 was pleased — and surprised — to handle a case that satisfied his interest in high-tech clean technology and investment.

“I got to work on a venture capital fund that involved clean technology,” says Toy, who now works for Simpson Thacher & Bartlett in Palo Alto, Calif. “I didn’t plan it, and you wouldn’t think that an environmental law clinic would be involved with a venture capital fund, but it was, and it worked out really well for me.” It also taught him a lot about professional responsibility, he adds. “You learn about producing for clients. You can never just throw something together, because these people are really depending on you.”

Michael Hiatt JD/MEM ’09 appreciates the perspective he gained working on a project to help the New Hope Creek Corridor Advisory Committee block the construction of an unnecessarily destructive bridge across the creek in Duke Forest.

“I’ve had some exposure to national groups working on big regional issues, but the New Hope Creek project was a chance to understand the importance of local groups facing these issues,” says Hiatt. “It sounds corny, but you actually see democracy in action.”

For Ryke Longest, director of the year-old clinic, that means that students are getting exactly what they need: a crash-course in dealing with clients and real-world situations in a way that acknowledges the blend of law, science, and policy that characterizes environmental challenges. “I think our students have found that the clinic is a useful preparation for professional life after graduation,” says Longest, who came to Duke after 14 years as an environmental lawyer for the North Carolina Department of Justice.

Because environmental issues often involve multiple parties and require an interdisciplinary approach, the clinic is open to law students as well as those pursuing graduate

degrees in Duke’s Nicholas School for the Environment, or dual degrees through both. The mixture of students from different disciplines and a range of clients with different needs helps to prepare students in a way that purely theoretical exercises can’t, Longest notes.

Allison Carr, a 2008 graduate of the Nicholas School, said that exposure to the legal world was helpful to her. “No matter where I end up working, law and environmental policy [will be] intertwined. It was really useful to work with lawyers and learn the language of the law a little bit.”

Handling cases for non-profit groups and indigent individuals also allows students to learn about building relationships with clients and with the other stakeholders in environmental issues, according to Longest. “These are the kinds of things that are overlooked in the study of law, but become very important in the practice of law,” he says. *(continued)*



CLINIC TO CONDUCT STUDY IN CASE OF DISPUTE OVER NAVY TRAINING LANDING SITE IN N.C.

Over the next year, the Environmental Law and Policy Clinic will study the environmental impacts of a proposed naval landing field in eastern North Carolina.

Citizens Against OLF (Outlying Landing Field) retained the clinic to help them study the impacts a landing field would have on the area's residents and diverse habitats.

The proposed Sandbanks OLF is a 25,000 to 30,000-acre landing field in Gates County, intended for constant low-level flying and aircraft carrier "touch-and-go" practice, likely by combat aircraft.

According to the Citizens' web site, www.citizensagainstolf.com, farmers, local governments and politicians like Sen. Elizabeth Dole and State Sen. Marc Basnight, oppose the Sandbanks landing field. The group cites numerous concerns, including jet noise and the environmental impact on the Pocosin Lakes National Wildlife Refuge, which is 3.5 miles away from the proposed landing field.

Under the National Environmental Policy Act, the Navy is required to prepare an environmental impact statement before it can build. While the Navy prepares a statement, the clinic will conduct a study and prepare its own report, said Clinic Director Ryke Longest.

"We'll prepare a document as if we're the Navy," Longest said.

The project will be a model of the clinic's interdisciplinary approach, requiring work from Law School students and students at the Nicholas School of the Environment.

"If you're studying the impact of this facility on the river herring in the adjacent river, then initially we would expect to have a lot of focus on the environmental expertise of the Nicholas School students," Longest noted. "But let's say you do demonstrate an impact. Then, environmental law comes in, and you say 'OK, under fisheries conservation law in the state of North Carolina we have the following legal triggers that flow from that.'"

This will be the Navy's second attempt at an EIS. Their first EIS did not meet the legal standard, Longest said.

"The Fourth Circuit Court of Appeals upheld the decision at the U.S. District Court for the Eastern District of North Carolina, which found that the EIS had not adequately taken into account information about migratory birds," he explained. "The court said that the Navy had failed to seriously look at what the impact of the facility would be on the birds and vice versa, what the impact of the facility and its operation would be on the birds."

In addition to the clinic, Citizens Against OLF retained the Southern Coalition for Social Justice for legal counsel.

"The work that Duke's Environmental Law and Policy Clinic will perform is crucial to help us document how an OLF will affect the residents of Gates County who have been living in harmony with the natural environment through many generations," said SCSJ attorney Anita Earls.

Gates County officials say they are looking forward to seeing the clinic's report.

"An independent EIS study by Duke University should provide an unbiased assessment of the environmental concerns and environmental consequences of constructing an OLF in Gates County; which will be very valuable in countering the Navy's proposed action if they decide to move forward based on their EIS results," said Henry Jordan, incoming Gates County commissioner. ♡

The word is getting out among students and clients alike: Enrollment has more than doubled (from its original four to 10 students in the current semester) and increasingly challenging projects are filling the clinic's docket. (See story, above.)

To help meet student and client demand, Michelle Nowlin JD/MA '92, joined the clinic as a second supervising attorney in July. A co-founder of the *Duke Environmental Law and Policy Forum*, Nowlin returned to Duke after 13 years of practice with the Southern Environmental Law Center, where she handled complex environmental policy

and litigation. Having been a member of the clinic's founding advisory board, Nowlin observes that its success and continued growth is a foregone conclusion.

"I just think there is an incredible pent-up demand in the community and in the Law School," she says.

To underscore her point, Nowlin lists a few of the projects recently approved by the clinic's intake board: The clinic will be working in conjunction with N.C. Coastal Federation to evaluate flooding problems caused by new development in Elizabeth City; representing Pender Watch & Conservancy, which is oppos-

ing construction of a proposed cement manufacturing plant on the Cape Fear River; and working for the Carolina Farm Stewardship Association, researching legal obstacles to smaller, more localized sustainable agriculture, and developing recommendations for legal and regulatory reform to support this kind of agricultural development in the Carolinas.

"Those are just a few of our new projects," Nowlin says. "Needless to say, we think we'll be able to provide our students with more than enough work experience for some time to come." ♡

— Forrest Norman



DUKE ENVIRONMENTAL LAW

Sustainability at Duke



EXTERIOR VIEW OF THE NEW STAR COMMONS AND GOODSON LAW LIBRARY



New Law School facilities built with sustainability in mind

TAKE A TOUR OF OUR NEW “COMMONS” AND RENOVATED LIBRARY!

The Law School is currently in the process of having our new Star Commons LEED certified. Everything in the magnificent commons, newly renovated Goodson Law Library, Marcy’s Garden and other landscaping, and newly opened Refectory Café, is as green as can be. A major component of our environmentally-friendly construction is hidden from view in the HVAC system, but some more visible features are:

- the dual-flush toilets (standard throughout the Law School)
- use of fluorescent lights — wherever possible
- the bike racks — everywhere
- the recycled pond water used to water our gardens
- a café that purchases ingredients produced locally and sustainably.





Sustainability at Duke



DUKE DORM IS NATION'S FIRST TO BE LEED PLATINUM CERTIFIED

The Home Depot Smart Home at Duke University, a 10-person student residence hall for green living and learning, has achieved a top-level platinum standard for its design from the U.S. Green Building Council's LEED rating system. LEED stands for Leadership in Energy and Environmental Design.

The building becomes the first at Duke to achieve that standard. It is the second building in North Carolina – and the first new construction – to receive platinum certification. The other building is a 100-year-old building in downtown Raleigh that was recently renovated.

The 6,000 square foot residence, designed by students and advisers, earned 59 out of a possible 62 points in the green building rating system, making it “the first platinum-rated residence hall on the planet,” said Smart Home program director Tom Rose.

From its roof of plants and solar cells to the rainwater cisterns and sophisticated electronics in the basement, the Smart Home was designed to be adaptable, environmentally sustainable and technologically integrated. In addition to being built with recycled and sustainable materials, Smart Home boasts a fiber-optic network with the fastest Internet access on the campus, about 40 gigabytes per second.

Workshops adjacent to the living areas of the five-bedroom, three-bath home enable further tinkering and deployment of new technology. Wall panels in every room open easily to enable students to add features. ♡
— Karl Leif Bates

DUKE GETS HIGH SCORES ON “GREEN COLLEGE” REVIEWS

Duke University has received high marks on two recently-unveiled environmental rankings for universities.

The Princeton Review — known for its test-prep courses, books, and website resources helping students choose and get in to colleges — gave Duke a green ranking of 93 out of a possible 99 in its new “Green Rating” of colleges — a measure of how environmentally friendly the institutions are. The Princeton Review tallied numerical rankings for 534 colleges and universities based on data it collected from the schools in the 2007-08 academic year concerning their environmentally related policies, practices, and academic offerings.

The company developed the Green Rating in consultation with ecoAmerica (www.ecoamerica.org), a non-profit environmental marketing agency. The criteria for the rating (which ecoAmerica helped formulate along with the rating's data collection survey and methodology) cover three broad areas: 1) whether the school's students have a campus quality of life that is healthy and sustainable, 2) how well the school is preparing its students for employment and citizenship in a world defined by environmental challenges, and 3) the school's overall commitment to environmental issues. The institutional survey for the rating included questions on everything from energy use, recycling, food, buildings, and transportation to academic offerings (availability of environmental studies degrees and courses) and action plans and goals concerning greenhouse gas emission reductions.

The 2009 Kaplan College Guide has named Duke one of the nation's top 25 environmentally responsible schools in its first such compilation.

To develop the Guide, editors gleaned insights on green schools and professions from a wide array of constituents, including admissions directors, parents, students, and professionals. Kaplan reviewed a range of criteria to formulate its list of 25 green schools. Specific areas examined include: environmentally responsible campus projects; initiatives and courses offered; organizations and student groups on campus; and achievements noted in the Sustainable Endowments Institute's College Sustainability Report Card 2008. The list highlights schools whose efforts reflect a commitment to long-term sustainability and to encouraging students to make better choices. ♡

Faculty Environmental Scholarship and Activities (September 2007–August 2008)

Ryke Longest

Massachusetts versus EPA: Parens Patriae Vindicated, Duke Environmental Law & Policy Forum (forthcoming 2008)

"Clean Air Update," The State of Things, WUNC Radio, July 2008

Presenter, "Environmental Law Clinics: View From the Inside," Public Interest Environmental Law Conference, University of Oregon, March 2008

Jedediah Purdy

Climate Change and the Limits of the Possible, Duke Environmental Law & Policy Forum (forthcoming 2008)

Corn Futures: Consumer Politics, Health, and Climate Change, Environmental Law Reporter (forthcoming 2008) (with James Salzman)

Intellectual Climate Change, The Guardian (London), Nov. 20, 2007

Presenter, "Intellectual Climate Change," at "A Charged Atmosphere: The Future of U.S. Policy on Global Warming," Duke Environmental Law and Policy Forum's 2007 symposium, Duke Law School, November 2007

James Salzman

THE PRACTICE AND POLICY OF ENVIRONMENTAL LAW (Foundation Press, 2008) (with J. Nagle & J.B. Ruhl)

NATURAL RESOURCES LAW AND POLICY (2d ed., Foundation Press, 2008) (with J. Rasband & M. Squillace)

Is It Safe to Drink the Water?, Duke Environmental Law & Policy Forum (forthcoming 2008)

Corn Futures: Consumer Politics, Health, and Climate Change, Environmental Law Reporter (forthcoming 2008) (with Jedediah Purdy)

Making Sense of Information for Environmental Protection, Texas Law Review (forthcoming 2008) (with Doug Kysar)

THE STATE OF FOOD AND AGRICULTURE, UN Food and Agriculture Organization 2006-2007 (contributing author)

Population Growth and Sustainability, in STILL STUMBLING TOWARD SUSTAINABILITY (John Dernbach ed., 2008) (with Anne Ehrlich)

Negligence in the Air: The Duty of Care in Climate Change Litigation, 155 University of

Pennsylvania Law Review 101 (2007) (with David Hunter)

Ecosystem Services and the Public Trust Doctrine: Working Change From Within, 15 Southeastern Environmental Law Journal 223 (2007)

The Law and Policy Beginnings of Ecosystem Services, 22 Journal of Land Use & Environmental Law 157 (2007) (with J.B. Ruhl)

Presenter, "Ecosystem services," to Florida state and local legislators, Brevard Zoo, Brevard County, Fla., September 2007

Inaugural Distinguished Visiting Environmental Law Professor, Tel Aviv University School of Law, Tel Aviv, Israel, October 2007

Presenter, "Is it safe to drink the water?," Georgetown Law Center, Washington, D.C., November 2007

Commentator, University of Texas Law Review symposium on "Harnessing Information for the Next Generation of Environmental Law," Austin, April 2008

Presenter, "The impacts of corn consumption," Conference on Climate Change, Vanderbilt Law School, Nashville, April 2008

Presenter, "Creating markets for ecosystem services," University of Michigan Law School, Ann Arbor, April 2008

Presenter, "Policy options for drafting of the Ministry's Macro-Environmental Strategy," Chinese Ministry of Environmental Protection, Beijing, July 2008

Workshop participant, "Legal issues in payments for ecosystem services," International Union for Conservation of Nature, Lima, Peru, August 2008

Christopher Schroeder

ENVIRONMENTAL REGULATION: LAW, SCIENCE AND POLICY (6th ed., Aspen Publishers, forthcoming 2008) (with Robert Percival, Alan Miller & James Leape)

ENVIRONMENTAL LAW: STATUTORY AND CASE SUPPLEMENT WITH INTERNET GUIDE 2007-2008 (Wolters, Kluwer 2007) (with Robert Percival)

Beyond Cost-Benefit Analysis: A Pragmatic Reorientation, 32 Harvard Environmental Law Review 433 (2008) (with Sidney A. Shapiro)

California, Climate Change and the Constitution, Environmental Forum,

Summer 2008 (with Erwin Chemerinsky, Brigham Daniels, Brettny Hardy, Tim Profeta & Neil Siegel), reprinted from 37 Environmental Law Reporter News & Analysis 10653 (September 2007)

The United States Failure To Act in ECONOMIC THOUGHT AND THE FAILURE OF U.S. CLIMATE CHANGE POLICY (David Driesen ed., MIT Press, forthcoming 2008) (with Robert Glicksman)

Pre-emption Doctrine, in PERSPECTIVES ON FEDERAL-STATE AUTHORITY FOR HEALTH, SAFETY AND THE ENVIRONMENT (William Buzbee ed., Cambridge University Press, forthcoming 2008)

Visiting Scholar, Columbia Law School, 2007-08

Presenter, "Pressure for Change: Making Progress on Global Warming When the Federal Government is not Listening," Environmental Speaker Series, Michigan State University, November 2007

Speaker, "Legislating to Address Climate Change; Some Lessons from the Field," University of Houston Conference on Climate Change, February 2008

Distinguished Visitor and Lecturer, "Moving the 21st Century Environmental Agenda: Lessons from the Environmental Decade of the 1970s," Lewis & Clark School of Law, Portland, September 2008

Jonathan Wiener

Radiative Forcing: Climate Policy to Break the Logjam in Environmental Law, NYU Environmental Law Journal (forthcoming 2008)

Climate Change Policy, and Policy Change in China, 55 UCLA Law Review 1805 (2008)

Empirical Evidence for Risk-Risk Tradeoffs: A Rejoinder to Hansen and Tickner, 11 Journal of Risk Research 485-90 (2008) (with John D. Graham)

The Precautionary Principle and Risk-Risk Tradeoffs: A Comment, 11 Journal of Risk Research 465-474 (2008) (with John D. Graham) (reply to Hansen, Krauss & Tickner)

Think Globally, Act Globally: The Limits of Local Climate Policies, 155 University of Pennsylvania Law Review 1961-79 (2007)

President, Society for Risk Analysis, Chair, "Risk '007: Agents of Analysis," SRA annual meeting, San Antonio, December 2007; chair, "Risk Leaders Summit," and chair



of plenary session, "Risk and Sustainable Development," speaker, "Global Climate Risks," Second World Congress on Risk, Guadalajara, Mexico, June 2008; attendee, SRA-Europe meeting, Spain, September 2008

Presenter, "Better Regulation in Europe and Regulatory Reform in the United States," Society for Risk Analysis - Europe annual meeting, The Hague, Netherlands, June 2007

Presenter, "Comparing Risk Regulation in the U.S. and Europe," Environmental Law Research Seminar, Georgetown Law Center, Washington D.C., September 2007

Co-organizer and presenter, Duke University / NIEPS, with CIRED and IDDRI conference on "Climate and Development in the Changing World Order," Paris, October 2007

Presenter, "Worst-Case Scenarios, Precaution, and Risk," conference on Cass Sunstein's book, *Worst-Case Scenarios*, Harvard Law School, October 2007

Presenter, "A Charged Atmosphere," *Duke Environmental Law & Policy Forum* conference on climate change law, Duke Law School, November 2007

Panelist, "Cap and Trade for Greenhouse Gases," Duke Environmental Law Society, Duke Law School, November 2007

Presenter, "New Thinking on Climate Policy," AEI-Brookings Joint Center for Regulatory Studies, Washington D.C., November 2007

Presenter, "Radiative Forcing: Climate Policy and the Future of Environmental Law," seminar series on "Breaking the Logjam," New York University Law School, December 2007

Presenter, "Climate Change Policy, and Policy Change in China," *UCLA Law Review* Symposium on Changing Climates: Adapting Law to a Transforming World, UCLA Law School, Los Angeles, January 2008

Presenter, "Policy Insights for Global Climate Modeling," Energy Modeling Forum, Dublin, Ireland, February 2008

Presenter, "Global Cooperation on Global Climate," William & Mary Law School Symposium, Williamsburg, Va., February 2008

Presenter, "Radiative Forcing: Climate Policy to Break the Logjam in Environmental Law," Conference on "Breaking the Logjam," New York University Law School, March 2008

Presenter, "Global Cooperation on Global Climate," University of Toronto Law School, March 2008

Panelist, "Climate Change and the Law," Duke Law Alumni Weekend, April 2008

Presenter, "Managing the Regulatory State: Oversight Bodies in the U.S. and EU," European Risk Forum, Brussels, May 2008

Visiting professor, Sciences Po, Paris, May 2008

Lecturer, "The Role of Judges in the Regulation of Risks," before the judges of the Court of Appeals of Paris, May 2008

Lecturer, "Risk Regulation," Master's Program in Economic Law, Sciences Po, Paris, May 2008

Presenter, "Benefit-Cost Analysis: Lessons from the United States and Europe," conference on Advancing Social Policy through Benefit-Cost Analysis, Washington, D.C., June 2008

Presenter, "The Tragedy of the Uncommons," conference on Global Catastrophic Risks, Oxford University, Oxford, UK, July 2008

Presenter, "Tradable Permits and Global Public Goods," conference of Réseau ID, Collège de France, Paris, July 2008

ROADY NAMED PROFESSOR OF THE YEAR AT NICHOLAS SCHOOL

Students at Duke's Nicholas School for the Environment awarded Stephen Roedy '76 the 2007-08 Professor of the Year Award for Classes Under 30 Students, for Oceans and Coastal Law and Policy. An environmental lawyer at Earthjustice, Roedy also regularly teaches the class at the Law School, in addition to teaching classes on environmental litigation and overseeing environmental advocacy outplacements.