

THE NEXT GENERATION OF ENVIRONMENTAL LAW

A CONVERSATION WITH PROFESSOR DAN ESTY



More than thirty years ago, one of the cornerstones of environmental law was laid at Yale Law School when Gus Speth '69 (now dean of the Yale School of Forestry & Environmental Studies) and a group of his classmates gathered in the Law School dining hall and started sketching out what would become the Natural Resources Defense Council. Today, Yale Law School continues to build on its strong tradition of environmental law. 🌿 At the forefront of this next generation is Dan Esty '86, Hillhouse Professor of Environmental Law and Policy at Yale Law School and the Yale School of Forestry & Environmental

Studies. Recently the *Law Report* sat down with Professor Esty to learn more about the direction of environmental law today, and its study at Yale. In the Q & A that follows, Professor Esty discusses, among other things, the new data-driven approach to environmental law and his belief in putting innovation and the resources of the private sector at the heart of the search for clean energy.

YLR: Why is going green such a hot topic right now?

Esty: Top executives across the business world have come to the conclusion that going green is essential to being competitive in today's marketplace... Society faces significant environmental challenges with climate change, availability of water, air and water pollution, and exposure to chemicals and heavy metals. I think companies now understand that those who can provide solutions to these issues stand to profit.

There are also big potential payoffs from investments in what we call "eco-efficiency." Specifically, efforts to reduce energy consumption and cut waste and inefficiency improve resource productivity, which lowers costs and improves profitability.

There are also a lot of companies looking at ways to reduce environment-related risks as a point of competitive advantage. For example, if Mattel had better managed its supply chain, it would not have had to recall 18 million toys, some of which were coated in lead paint, at a cost of hundreds of millions of dollars.

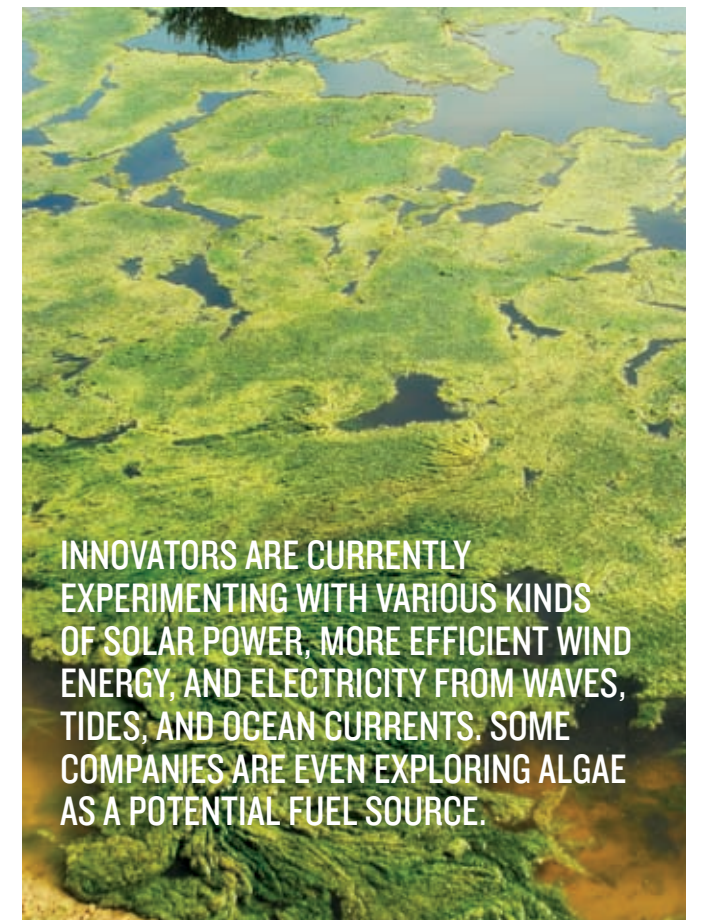
All of this signals a shift to a new approach to environmental regulation focused on promoting innovation and engaging the private sector in driving technology development. Under the old model of "command and control" mandates, the government not only sets a standard that has to be complied with, but in many cases, dictates the precise technology that a producer has to deploy, such as a particular kind of scrubber on a smokestack or effluent filter. We're evolving now toward a new approach that relies much more on economic incentives and market mechanisms. Under the new approach, the government tells you how much you pay for the harm you cause. This creates a logic for businesses to think about what they're doing and to try to reduce emissions. This "pay for harm" model also creates a very important incentive for innovation because companies begin to think not only about how to bring their own emissions down, but also how to come up with the very best solutions to sell to their customers and everyone else.

In your book *Green to Gold*, you discuss the role of the private sector. What exactly makes the private sector so important?

It turns out that the business world is better placed to do technology development than the government. When you throw a challenge to the private sector, people approach it with hundreds of different points of view and lots of options are tried out. That diversity enriches the search for innovation. The private sector is also willing to take risks that the government often can't or won't. A government official balks at an innovative solution with a one in ten chance of a successful payoff. But in the venture capital world, a one in ten chance of payoff is expected... The government might spend a few million or, if we get really

ambitious, a few billion dollars to fund potential solutions. But over the last year alone, more than 100 billion dollars of private capital has been injected into the "clean-tech" arena. The scale of the private sector's capacity to innovate is just much greater than the government's, and frankly, the private sector rewards success in a way that the government is unable to match.

This move toward an innovation-focused approach to environmental protection creates opportunities for companies of all sizes and types—from giant conglomerates to garage-based inventors. This creative process promises to move us toward a "clean energy" future in the next couple of decades. Innovators are currently experimenting with various kinds of solar power, more efficient wind energy, and electricity from waves, tides, and ocean currents. Some companies are even exploring algae as a potential fuel source. Others are working with second-generation biofuels, moving beyond corn-based ethanol to prairie grasses and agricultural waste that provide the foundation for cellulosic ethanol.



INNOVATORS ARE CURRENTLY EXPERIMENTING WITH VARIOUS KINDS OF SOLAR POWER, MORE EFFICIENT WIND ENERGY, AND ELECTRICITY FROM WAVES, TIDES, AND OCEAN CURRENTS. SOME COMPANIES ARE EVEN EXPLORING ALGAE AS A POTENTIAL FUEL SOURCE.

Given all that, what do you think the government's role should be? What can the government do?

Let me be very clear: when I say the government shouldn't be doing the technology development, it doesn't mean that government doesn't have a role. To the contrary, the government has to be all the more adept at crafting incentives to engage the private sector in this innovation process. There needs to be a carefully constructed portfolio of incentives that draws the business community into the search for solutions—attracting venture capitalists, private equity, and other investors to put significant resources into the environmental solutions arena. We need to lure the creative spirits that exist across the United States and around the world to focus time and talent on addressing pollution control and natural resource management challenges. Our goal should be to attract the best and brightest talent away from developing the next video game and toward meeting our energy and environmental needs.

What do you see as the biggest environmental or sustainability issue facing the new administration?

Frankly, the next President will need to employ a multi-pronged agenda to make up for the painfully slow progress made across the spectrum of environmental challenges over the last decade. Climate change looms largest among the immediate problems we face. It has such broad consequences and affects decisions made by every individual, household, and company across our society. U.S. leadership is essential if we are to have a successful global climate regime. Of course, the nation's economic troubles overshadow everything else. So I expect the new administration's initial environmental focus to be a "green economy" initiative designed to help stimulate growth.

This is probably the million-dollar question: how do we extract ourselves from fossil fuels?

I think there is bad news and good news in terms of getting beyond fossil fuels. The bad news is that our energy structure has been dependent on fossil fuels for a very long time so it's

going to take time and tremendous effort to remake the infrastructure on which our society and economy is built. To move to a clean energy future will require a broad base of incentives and really transformative thinking.

The good news is that the public is ready for change in a big way. I think the public is very frustrated by the war in Iraq and more broadly believes that the Middle East is a very complicated part of the world—one that we don't understand very well. Having the energy supply lines of our country run through that part of the world, for many people, seems unwise. And the next tier of oil suppliers—Russia, Kazakhstan, Nigeria, and Venezuela—are also unattractive places to be dependent on. Research we have conducted at the Yale Center for Environmental Law and Policy suggests that the public wants to break this dependence on foreign energy sources. Americans are ready for the alternative energy future, willing to pay a premium for clean energy that also meets our security and strategic interests.

Beyond that, people are frustrated by the budget pinch of

Center for Environmental Law & Policy

The Yale Center for Environmental Law & Policy was established in 1994 as a joint initiative between the Yale School of Forestry & Environmental Studies and Yale Law School. The Center's mission: to advance fresh thinking and analytically rigorous approaches to environmental decision-making—across disciplines, sectors, and boundaries.

The Center serves as a leading resource for the development of next-generation environmental law and policy while training future environmental leaders.

Under the umbrella of the Center for Environmental Law & Policy, researchers work on programs devoted to Environmental Performance Measurement, Environmental Attitudes and Behavior, Innovation and the Environment, and Environmental Law & Governance.

website <http://envirocenter.research.yale.edu/>

high energy prices. Fundamentally, we face a structural imbalance between energy supply and demand. We just don't have a lot of new fossil fuel sources to tap. Investments in conservation and energy efficiency can ramp down demand. But the real solution lies in new sources of supply, which means alternative energy. We must move toward a clean energy future and embrace the commitment and effort that comes with figuring out the specifics of which renewable energy options can be made cost effective.

Could you talk a little bit about the history of environmental law and put it in context for us as far as this next generation of environmental law?

Modern environmental law was invented, in many ways, by people at Yale. In the early 1970s, we had a crew of folks here who sat in the Law School dining hall contemplating the deteriorating environmental situation across our country. They became convinced that something needed to be done. Gus

New Faculty Bolster Environmental Law Offerings

The Law School's environmental law program gained two new faculty members during the 2008–2009 academic year with the appointments of Douglas Kysar and Thomas Merrill.

Kysar's teaching and research areas include torts, international environmental law, and risk regulation. His courses include Constitutions and the Environment and The Law of Climate Change. He has published several articles on a wide array of environmental law topics. His forthcoming book, *Environmental Policy and Law*, will be a collaborative effort with Hillhouse Professor of Environmental Law and Policy Dan Esty '86.

Merrill specializes in property, environmental law, administrative law, eminent domain, and the U.S. Supreme Court. Having formerly taught at Columbia Law School and Northwestern University, he also served as a Deputy Solicitor General from 1987 to 1990. His recent courses include one on Natural Resources Law.

Speth, who is now the dean of the School of Forestry & Environmental Studies, and some of his classmates decided to write a proposal to the Ford Foundation for money to launch an environmental advocacy group. That group became today's renowned Natural Resources Defense Council. Speth and his friends were consciously following the civil rights model. Their

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CLIMATE CHANGE LOOMS LARGEST AMONG THE IMMEDIATE PROBLEMS WE FACE. IT HAS SUCH BROAD CONSEQUENCES AND AFFECTS DECISIONS MADE BY EVERY INDIVIDUAL, HOUSEHOLD, AND COMPANY ACROSS OUR SOCIETY.

10 THINGS YOU CAN DO FOR THE ENVIRONMENT *

1 Replace incandescent light bulbs. Florescent bulbs produce the same amount of light but use a quarter of the energy and can now be recycled for free at most Home Depots.

2 Save energy at home. Install weather stripping around doors and windows and turn down the thermostat, wrap a blanket around your hot water heater, use a clothesline, and keep the coils under your refrigerator vacuumed.

3 Walk, bike, and explore mass transit. You'll reduce emissions and vote with your feet for improved non-auto transportation infrastructure.

4 Drive efficiently. If you do drive, keep your car tuned, tires inflated, and trunk empty to ensure better gas mileage.

* Compiled by The Yale Environmental Law Association (YELA). The Yale Environmental Law Association (YELA) is a student organization that aims to build on Yale Law School's strong environmental legacy by drawing attention to all aspects of environmental law through speaker panels, community events, and opportunities to connect and collaborate with other campus groups. YELA also works to promote sustainability in the use of law school facilities.

website www.law.yale.edu/yela

Environmental Protection Clinic

Students interested in environmental law have the opportunity to gain hands-on experience in the fields of environmental advocacy and policy through the Environmental Protection Clinic. A joint enterprise of the Law School and School of Forestry & Environmental Studies, the clinic allows students to work on litigation, complex negotiation, political, economic, and policy analysis, strategic planning, and community service. Throughout a given semester, students work with clients, including national, state, and local environmental organizations, think tanks, government agencies, international organizations, and local citizen groups. As part of one of the clinic's most recent projects, a team of four clinic students worked with the New Haven Environmental Justice Network to address the presence of a sewage sludge incinerator in an underprivileged part of New Haven. Clinic students evaluated legal and political options for stopping the importation of sludge and compelling the facility to use better pollution controls. They made recommendations for local officials, evaluated a lengthy and technical cost/benefit analysis of alternatives to sludge incineration, clarified the complicated regulatory and governance structure of the quasi-governmental agency, and participated in a public education campaign. Other projects have been more nationally focused, including a litigation project for The Sierra Club, which developed in the wake of the Supreme Court's historic decision in *Massachusetts v. EPA*.

website www.yale.edu/elc

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vision was to get a number of landmark, framework statutes—for air, water, and waste—adopted, and then, through their advocacy group, bring forward test cases to flesh out the details of the law. They were, of course, very successful in using law as a tool for change. And I think if you look across the environmental world more broadly, Yale graduates occupy a significant number of leadership positions. From my point of view as a professor, one of the most exciting things about teaching here is watching the next generation of environmental law come to life here at Yale. Our students are never satisfied with learning what the law is. They always want to think about what it could be and should be.

I hope my work at the business-environment interface has helped people develop a new understanding of the best path forward. Our work at the Yale Center for Environmental Law and Policy, and at Yale in general, has highlighted the importance of innovation as well as being more data-driven and empirical in decision-making. Our Environmental Performance Index ranks 149 countries on 25 different dimensions of their pollution control and natural resource management. These indicators are valuable to decision makers. They facilitate comparative analysis, highlighting leaders and laggards and making it easier to spot best practices.

There is a great deal that Yale has done in the past and is doing now to advance environmental law. Perhaps the most exciting recent development is the renewal of the law school's core environmental faculty. The addition of Doug Kysar from Cornell and Tom Merrill from Columbia gives us extraordinary depth. Both of them are true leaders in the environmental law and policy arena. (See sidebar, page 39.)

And we are lucky to still have Carol Rose, albeit part-time. She continues to be one of the great thinkers at the interface of environment and property. Dan Kahan is another force with his extensive studies on understanding risk and how people manage risk in their lives. We are also fortunate to have Don Elliott continuing to teach courses. He is one of the pioneers in thinking

through the way the economic incentives should play into the legal structure. And, of course, we have inspirational figures like Bruce Ackerman, who has been at the heart of the battle for a new approach to environmental protection for three decades, as well as Susan Rose-Ackerman, whose comparative regulatory analyses have helped to illuminate the strengths and weaknesses of the environmental regimes of the United States and Europe. We're fortunate to have people who contribute to the broader backdrop that environmental law sits in—administrative law. Jerry Mashaw is, of course, the true leader of the field in many regards. Many of us, including me, have had our own approaches to environmental regulation shaped by Mashaw's broad-based vision of how administrative law works. Peter Schuck's thinking about how to refine administrative law further enhances our faculty resources here at Yale.

What is unique about the study of environmental law at Yale Law School?

Yale has great strengths when it comes to studying environmental law. Most notably, the presence of the country's leading environment school right across campus gives our students a breadth and depth of curricular offerings that really can't be found anywhere else. Someone coming to Yale with an interest in the environmental arena has the opportunity not only to take Law School courses, but also a wide array of courses across campus. The School of Forestry & Environmental Studies provides courses across a wide range of topics. The School of

Epidemiology and Public Health provides a broad-based set of environmental health offerings. Our International and Area Studies program gets people to think from a global perspective about environmental challenges. Yale's Divinity School has provided a platform for discussing ethics and the environment, so people can explore the moral underpinnings of a commitment to environmental protection. This is important because it is becoming increasingly clear that spirituality has a significant role to play in motivating people to address environmental challenges. And we have an economics department with fabulous faculty resources, as well as the School of Management, where the interface between business and environment, and economics and the environment, comes together. This interdisciplinary convergence is fundamental to good public policy and sound environmental decision-making more generally. **Y**

website www.law.yale.edu/environmentallaw

podcast www.law.yale.edu/podcasts



Nobel laureate R.K. Pachauri, Yale University President Richard C. Levin, California Governor Arnold Schwarzenegger, and Professor Dan Esty were among those who participated in a two-day Conference of Governors on Climate Change, which was hosted by the University in April 2008. Photograph by Michael Marsland

Sustainable Yale

Yale University has taken on significant green initiatives and set aggressive goals for its energy use in the years to come. For example, the University has committed to a greenhouse gas reduction target of 43 percent below 2005 levels by 2020. For more information about Yale President Richard C. Levin's sustainability goals for the University, visit www.yale.edu/sustainability.

5

Bring your own bags.

Americans use and dispose of billions of plastic bags every year. Bring reusable bags to the grocery store; if you forget them, try to avoid unnecessary double-bagging.

6

Choose renewable energy.

Find out if your electricity provider lets you opt for suppliers that use wind, solar, or other forms of renewable energy.

7

Conserve water.

Install low-flow showerheads, don't let the faucet run when you're not using it, and only run the dishwasher when it's full.

8

Eat local.

Buying locally-grown foods reduces the energy used in transportation and usually guarantees fresher ingredients.

9

Think before you print.

Only print documents you really need in hard copy and print double-sided where possible.

10

Educate yourself and your community.

Staying up-to-date on environmental issues will help you be a more informed voter and consumer.