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PERC REPORTS

THE MAGAZINE OF **FREE MARKET ENVIRONMENTALISM**

**These lands are
your lands**

The road to an epiphany

From farms to FME

A eureka moment

**Tapping the market
for a cleaner environment**

**Celebrating 15 years of
*Free Market Environmentalism***



FROM THE EDITOR

We can thank the late champion of freedom, Milton Friedman, for moving the principles of free markets into living rooms across America. He did this primarily through his book, *Capitalism and Freedom*, and his second best seller and accompanying TV series *Free to Choose*. The latter looks at the road the free market has traveled from its first account, in 1776, by Adam Smith in *The Wealth of Nations* to the free market economy we live in today. Friedman clarified that incentives spawned by markets make the world better. Unfortunately, this axiom is often left at the door when it comes to the environment.

Fifteen years ago, in their book *Free Market Environmentalism*, Terry L. Anderson and Donald R. Leal demonstrated that markets and the environment can not only meet, but also become good friends. The book was central in paving the way for a new and improved vision for environmental policy. Thanks in large part to Terry and Don's efforts, free market environmentalists are now making their way through an open door. For their ground-breaking success, *PERC Reports* honors the 15-year anniversary of *Free Market Environmentalism*.

In "These Lands Are Your Lands" G. TRACY MEHAN III, a former EPA administrator, encourages readers to bring an open mind to free market environmentalism (FME) by offering examples of how it works, such as the creation of the Prairie Project—a bold initiative to buy a large swath of Montana.

Nobel Laureate VERNON L. SMITH paints a colorful picture of his environmental journey from his tangible experiences on a Kansas farm to his intellectual embrace of the ideas supporting FME. Smith suggests that the journey to FME has only just begun as new services from natural resources continue to surface.

MATT RIDLEY and THOMAS J. BRAY each offer an insider's perspective, recalling their experiences at PERC's annual conference for journalists and confessing their conversions from newsroom liberals to true FMEs.

"Mandate, regulate, litigate" was the early slogan of the environmental movement according to FRED KRUPP, president of Environmental Defense. Today many environmentalists have realized that harnessing the power of the market is often the best way to achieve the greatest environmental benefit at the lowest cost. Environmental Defense has been a leader in putting FME to work on the ground, through the water, and in the air.

In his column "Tangents," DANIEL K. BENJAMIN tackles the importance of electoral incentives in determining environmental policy, and TERRY L. ANDERSON'S "On Target" gets to the heart of free market environmentalism by contrasting "market-like environmentalism" (MLE) with FME. Also be sure to explore the benefits of java logs, turkey fryer fat, snails, and urban lumber in LINDA PLATT'S "Greener Pastures." New to *PERC Reports* is "Impressions"—a collection of clever, thought-provoking quotations and witticisms regarding the environment. The quotes collected for this issue are related to *Free Market Environmentalism* and the impact of the FME model.



If you haven't had a chance to read *Free Market Environmentalism*, I hope you will. And to Don and Terry, thanks for introducing me to the world of FME—looking forward to the third edition!

Laura E. Huggins

Laura E. Huggins | EDITOR

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THE MAGAZINE OF FREE MARKET ENVIRONMENTALISM

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LETTERS: Address letters to PERC,
2048 ANALYSIS DRIVE, SUITE A, BOZEMAN, MONTANA 59718-6829
PHONE: 406.587.9591 OR LAURA@PERC.ORG
Include daytime phone number. Letters may be edited.
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FEATURES

5 THESE LANDS ARE YOUR LANDS

Why *Free Market Environmentalism* is the magnum opus of a new generation of greens
BY G. TRACY MEHAN III

9 THE ROAD TO AN EPIPHANY

The eyes of a "keen conservationist" are opened
BY MATT RIDLEY

12 FROM FARM TO FME

Nobel Laureate sees promise in the future of the environment using markets
BY VERNON L. SMITH

16 A EUREKA MOMENT

Newsroom liberal becomes market-loving environmentalist
BY THOMAS J. BRAY

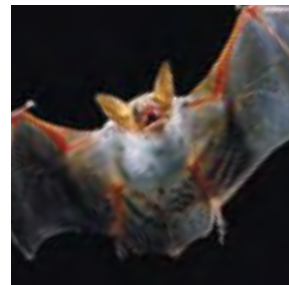
18 MARKETS FOR A CLEANER ENVIRONMENT

Making environmental protection profitable leads to results
BY FRED KRUPP

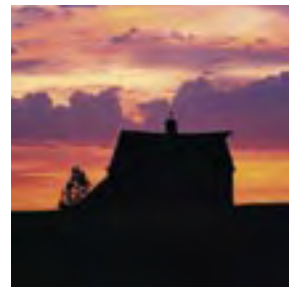
5



9



12



COLUMNS

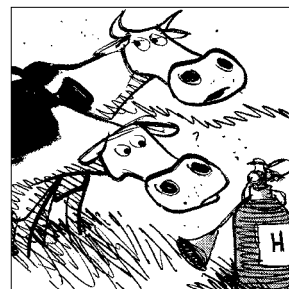
22 TANGENTS

Single-issue voters matter when it comes to the environment
BY DANIEL K. BENJAMIN

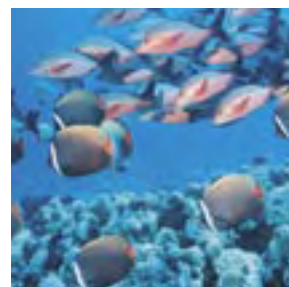
24 ON TARGET

Regulation dressed in market-like clothing doesn't equal free market environmentalism
BY TERRY L. ANDERSON

16



18



PERSPECTIVES

4 OPINIONS

14 IMPRESSIONS

25 GREENER PASTURES

Java lights your fire, turkey fryer leftovers power a revolution, urban trees leave a legacy, and workers adapt to a snail's pace
COMPILED BY LINDA E. PLATTS

22



OPINIONS



PES model needs replicating

Coming from another Latin-American country, it was very informative for me to see [in “Bees and Barbed Wire for Water,” December 2006] this case of payments for environmental services (PES) working effectively. When we are talking about property rights in Latin American and Caribbean countries, we always have to deal with issues like lack of land tenure, especially titles.

For that reason it is challenging to see how the enabling conditions to start contracting were built at the same time that the confidence between partners was enhanced.

This is a very good example of mobilizing biodiversity funds from an external donor. The most important point in this PES case is that the payments are made in sustainable production systems that generate income for landowners and tenants so they can commit to protect some areas for conservation purposes. Scaling or replicating this model in other areas will be the next step.

—Daniel Arcila

Private Lands Coordinator

The Nature Conservancy

Colombia

On the right track

Cooperative efforts such as grassbanks between conservationists and ranchers are to be applauded. Grassbank programs, like those mentioned in the December 2006 issue of *PERC Reports*, that fit the local environmental conditions and the desires of the people are likely to be more successful than the bureaucratic command-and-control approaches. Providing incentives through a market is one of the keys to encourage participation, create win-win outcomes, and reduce the acrimony between ranchers and conservationists. Grassbanks are on the right track.

—Myles Watts

Professor of Agricultural Economics

Montana State University-Bozeman

Dam-busting praised

Not only does James Workman explain that most dams have a useful life and afterwards can cause more harm than good, he presents a practical way to get rid of obsolete dams: “businesses seek out credits generated by third-party projects for environmental services in advance of their proposed development—and pay handsomely for them... the average obsolete dam may be worth far more broken up than left intact; the sum of its removed parts are worth more than the integrated whole. Busting the dam could release a net gain in legitimate, measurable economic value, which can be brought to market and sold to willing buyers.”

Workman estimates there are 79,000 dams in the United States, and that 85 percent of these dams are no longer providing economic benefits. Meanwhile there are developers throughout the USA who are trying to provide new industrial, commercial, and residential facilities for a country whose population just topped 300 million and grows by over 3 million per year. All of them are required to mitigate whatever land and habitat their developments encroach upon, usually by ratios well beyond one-to-one.

Another noteworthy point regarding dams is the value of an alternative to mega-dams, which is to build small check dams. These dams catch seasonal flows and divert the water to temporary basins where they refill aquifers. This is a terrific way to recharge the water tables, particularly in areas where wells for crop irrigation have drawn underground water reserves to dangerously low levels.

—Excerpted from *EcoWorld.com*



Tell me what you think!

Write to me:

Laura Huggins

PERC

2048 Analysis Drive, Ste. A
Bozeman, MT 59718

Or drop me an e-mail:

laura@perc.org

These Lands Are Your Lands

This is the 15th anniversary of the publication of *Free Market Environmentalism* by Terry L. Anderson and Donald R. Leal, the magnum opus for those who view property rights, local initiative, and economic incentives as friends, not enemies, of the natural world.

Max Borders of *TCS Daily* has said that this is “the book that changed the way many people look at environmental issues.” It is “the book that defined a generation of newer environmentalists, a generation that is friendly to markets, to green values, and to the idea that these are not mutually exclusive.”

BY G. TRACY MEHAN III

At the heart of free market environmentalism is a system of well-specified property rights to natural resources.



*Incentive matter.
That is a bedrock
principle of
free market
environmentalism.*

For Anderson and Leal, “At the heart of free market environmentalism is a system of well-specified property rights to natural resources.”

“Whether these rights are held by individuals, corporations, non-profit environmental groups, or communal groups, a discipline is imposed on resource users because the wealth of the owner of the property right is at stake if bad decisions are made,” argued Anderson and Leal, who are part of PERC, the Property and Environment Research Center, in Bozeman, Montana, which is the vanguard of free market environmentalism.

They cite the Nature Conservancy (TNC) as “an excellent example of how free market environmentalism works.” TNC is the world’s largest land trust with a million members and supporters which has protected 117 million acres of land and 5,000 miles of rivers worldwide. Its primary mission is to protect the highest value expressions of biodiversity.

Anderson and Leal challenged the reigning paradigm of scientific management of public lands through the instrumentality of the federal government. This was the legacy of Gifford Pinchot, the first chief of the U.S. Forest Service (1905–1910), and the Progressive Movement which sought to rely on government experts to regulate and prioritize the multiple uses of land through an administrative or political process.

The insights of Anderson and Leal as they relate to the sausage making, which is public lands management, were revelatory:

There is good evidence that political land management has ignored important recreational and amenity values and that there is potential for providing them through markets in ways that promote harmony between development and ecology.

Incentives matter. That is a bedrock principle of free market environmentalism. There is also the appreciation for the inadequacies of information and the necessity of trade-offs, both of which make “political” management difficult. These realities can trump the best of intentions:

Even if the superintendent of national parks believes that grizzly bear habitat is more valuable than more campsites, his good intentions will not necessarily yield more grizzly bear habitat. In a political setting where camping interests have more influence over a bureaucrat’s budget, his peace and quiet, or his future promotion, intentions will have to override incentives if grizzly bear habitat is to prevail. But if a private resource owner believes that grizzly habitat is more valuable and can capitalize that value, then politics will not matter.

If you consider all the infamous battles over public land use, you can appreciate how “scientific management,” at least on federal lands, degenerates into the political equivalent of mud wrestling: owls versus logging, salmon versus irrigation and dams, snowmobiling versus cross-country skiing, grazing versus biodiversity.

There are, of course, countervailing arguments, based on equity and ecology, which point to the benefits of public lands. Access is one. Scale, in terms of watersheds, ecosystems, and vistas, is another. But as the TNC example proves, free market, private sector approaches can compensate for or overcome the disadvantages of political management of landscapes.

Free Market Environmentalism also emphasized the tendency of

the political sector to externalize costs. The Holy Grail of most economists is to internalize costs, i.e., make those who benefit from the economic activity bear the costs or avoid the spillover effects, e.g., pollution, from their activities. This encourages efficiency and equity by discouraging waste and harm.

But government tends to externalize rather than internalize costs, because politicians and bureaucrats are rewarded for responding to political pressure groups. Thus, “there is no guarantee that the values of unorganized interests will be taken into account even if they constitute a majority of the population,” claimed Anderson and Leal. Voters are “rationally ignorant” because benefits can be concentrated and costs diffused.

If you consider all the environmental degradation, pollution, and over-exploitation resulting from subsidized water, agricultural subsidies, below-cost timber sales, below-cost grazing fees, and tariffs on sugar imports (to the detriment of the Everglades as well as consumers), they all benefit favored constituencies at the expense of the taxpayers and the environment.

Free Market Environmentalism was published in the wake of the collapse of the Berlin Wall, the dissolution of the Soviet Empire, and the revelations of environmental degradation at a scale unimaginable even during the height of the Industrial Revolution in the West. Absent a robust civil society bolstered by private property, a productive economy, and a democratic regime with an active feedback loop, the nations behind the Iron Curtain experienced untold health and environmental catastrophes with which they must cope for generations.

The Soviet Union’s environmental failure was Exhibit One relative to government failure as opposed to the traditional liberal complaints of market failure. This historical context was one reason for the receptivity of many readers to the lessons of *Free Market Environmentalism*.

Another timely development which encouraged readers to bring an open mind to *Free Market Environmentalism* was the passage of the Clean Air Act Amendments of 1990 which established the ambitious and, as it turned out, very successful, market-based cap-and-trade program to combat acid rain caused by sulfur dioxide emissions. The GAO has projected the long-term savings of this trading program to be as much as \$3 billion per year—more than 50 percent—compared with a traditional command-and-control approach.

The arguments of free market environmentalists are quintessentially Lockean with their emphasis on well-specified, defensible, transferable property rights. These techniques can work very well for certain consumptive uses such as hunting for fee, or individual fishing quotas for marine fishing allotments. However, for a property rights approach to succeed environmentally in these and other areas such as air and water quality, it is often necessary to adopt some regulatory drivers or mandates to create mechanisms such as cap-and-trade programs which allow for the sale of credits generated by a discharger who can reduce pollution more efficiently than others.

To put it another way, while libertarians view free market environmentalism as an end in itself, many others will view it as a means of achieving community or ethical norms of environmental stewardship. Fred Smith of the Competitive Enterprise Institute describes the latter position as “free-market socialism,” but a Burkean conservative might be more forgiving.

But these are abstract questions which need not worry us. There is ample room to inject more freedom, incentives, and efficiency into our existing regulatory programs while pursuing this new paradigm in



There is ample room to inject more freedom, incentives, and efficiency into our existing regulatory programs.

numerous areas of resources management and protection, up to and including biodiversity or ecosystem protection. A concrete example illustrates this point.

Recently PERC's website provided a link to an article in *Orion Magazine* ("Prairie Dreaming," September/October 2006) by Hal Herring on the work of the American Prairie Foundation (APF) on the glaciated plains of eastern Montana cattle country.

Herring, who is a contributing editor at *Field and Stream*, describes the traditional divide between cattle ranching on the one hand and, on the other, grizzly bears, wolves, elk, prairie dogs as well as the swift fox, the ferruginous hawk, the mountain plover, the prairie rattlesnake, the badger, the black-footed ferret, and a complex web of plants.

At the same time, one in ten people have left the nearby town of Malta and the surrounding Phillips County since 1990. Ranching is tough despite the hardiness of the fourth-generation ranchers in the area. Evidently, a square mile of land can only support no more than six or eight cows.

Less than 1.5 percent of the native prairie landscapes in the United States are under any kind of long-term protection. The bison and prairie dog used to thrive in this region. "Native grasslands that once displayed a diversity as complex as 190 species of grasses and forbs per square meter now have an average of twelve," says Herring.

Under the leadership of Sean Gerrity, a native of Great Falls, Montana, and a former business consultant in Silicon Valley, the Bozeman-based APF is trying to execute a plan called, simply, the Prairie Project. According to Herring it seeks "to create one of the largest and most innovative conservation projects on Earth, a grassland reserve replete with as many native species as can be sustained ... it eventually could be half again as big as Yellowstone National Park."

The big difference, though, is that the Prairie Project intends to implement their vision with private, rather than government money. Herring quotes Gerrity as to the project being "a place of vastness" where people will be able to find a "spiritual connection to our native grasslands that's been lost." Gerrity can imagine that someday visiting this place will be like visiting a coral reef.

This effort in free market environmentalism is able to leverage its dollars due to the structure of federal and state grazing laws, usually viewed as a negative by ecologists. Since these laws give landowners de facto control over vast tracts of public land, when APF buys land, the grazing leases come with the property acquired. Herring explains:

The APF simply wants to acquire private ranchlands and their accompanying federal grazing leases, and make conservation a priority on both. They'll do so by paying ranchers market value for both the private land and the leases that they hold. "We don't advocate for anything," says Gerrity. "We have a single mission of acquiring land for conservation."

APF, for instance, purchased the Wiederrick Ranch, some 4,700 acres of deeded land. With this purchase came 12,390 acres on Bureau of Land Management lands and 4,360 acres on

state lands. It then converted the leases from cattle to buffalo. There are also grazing leases on 26,000 acres of the Charles M. Russell National Wildlife Refuge which were retired at the time of the sale of the ranch.

"Bottom line: By buying 4,700 acres, the American Prairie Foundation exerted de facto grazing control over nearly 48,000 acres altogether," notes Herring.

Just as interesting is Herring's descriptions of the varying reactions from some ranchers and environmentalists who are not thrilled about these developments. Besides fear of disease from the buffalo infecting their herds, some ranchers are skeptical that any good will come of this initiative. They express doubts that it is sustainable. Moreover, there is a fundamental attachment to the life of ranching which, despite the demographic and financial realities, is a strong pull on their hearts.

The environmentalists quoted seem to be equally suspicious since they appear to have more faith in the older model of government-controlled conservation. Private land can be sold. They blame the current political climate, i.e., the Bush administration, for making it more difficult to rely on government funding to any significant degree.

APF is giving a lot of thought to encumbering their newly acquired lands with conservation easements, presumably for land protection. However, it is reasonable to speculate that such easements would make it easier for low-impact ranching to continue thus providing for financial sustainability over the long run. That would be consistent with APF's stated goals of creating "a fully-functioning prairie-based wildlife reserve" and "ensuring that the land remains productive in a way that contributes significantly to the local economy."

But what appears to be certain, for now at least, is that APF has no plans to turn lands over to the federal government. This practice is sometime referred to in derogatory terms as "flipping" by some critics of the land trust movement. APF for its part appears to be conscious of the problems of "political" management of public lands as described by Anderson and Leal.

"We are happy to have so many good people to collaborate with ... but the APF board will always make the decisions," claims Gerrity. "There won't be any kind of round table, like the UN, where sixty-five different people have to agree on everything before anything gets done."

We may not all be free market environmentalists yet, but the movement is still young and there is much to be gained by studying the insights of Anderson, Leal, and the other visionaries at PERC.

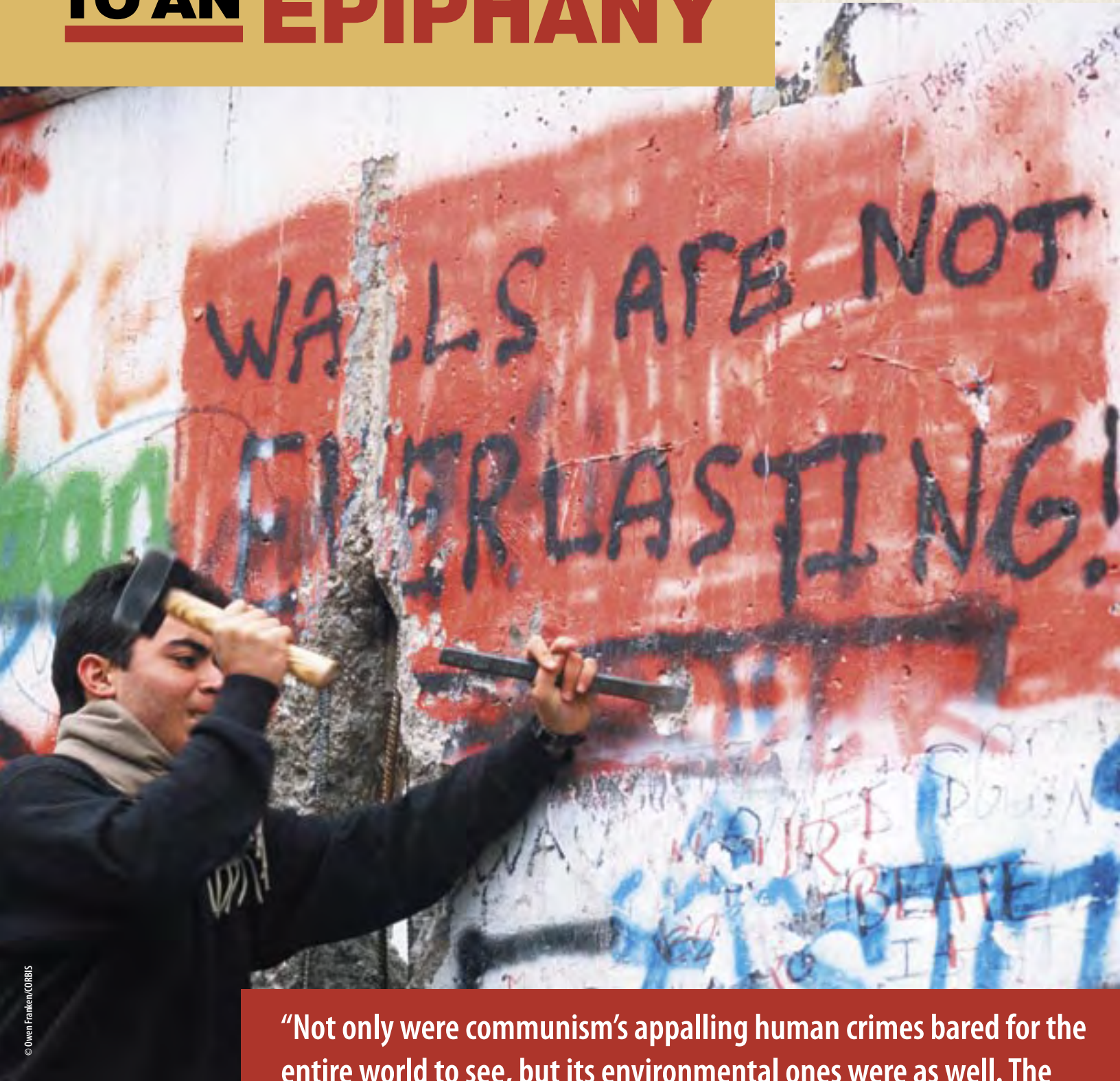
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G. Tracy Mehan III served at the EPA in the administrations of both Presidents Bush. He is presently a principal with The Cadmus Group, Inc., an environmental consulting firm in Arlington, Virginia, and an adjunct professor at George Mason University School of Law.

THE ROAD TO AN **EPIPHANY**

By Matt Ridley



“Not only were communism’s appalling human crimes bared for the entire world to see, but its environmental ones were as well. The day the Berlin Wall came down . . . ”

Photo depicts a man chiseling at a graffiti-covered section of the Berlin Wall.

© Owen Franken/CORBIS

In 1987 I became chief correspondent for the *Economist* in Washington. My predecessor gave me a few tips as he moved to London. One of them was: "If you get an invitation to a PERC meeting in Montana, grab it! You'll have a great time in the Rockies watching elk and, although they've got some crazy ideas, they are worth listening to."

He was right. I went to a PERC journalists' conference, right in the middle of the infamous Yellowstone fire, which proved to be a big distraction. Still, I recall Terry Anderson bugling to elk, Aaron Wildavsky making no sartorial concessions to the West, and some great late-night arguments about the role of the state.

It came at a time when my eyes were opening. Aged 30, I was a keen conservationist and enthusiastic naturalist. I had briefly been a field research biologist before I became a journalist and I was born on a farm in northern England. But it hardly occurred to me until then that conservation could be done by anybody other than governments. And like most Europeans, I knew all about "market failures" and not nearly enough about the perverse incentives and bureaucratic momentum of government failures.

Meeting PERC and reading Terry and Don's book set me thinking. The following year I found myself covering the Clean Air Act revisions as they passed through Congress, and I was very struck by how most of the environmental organizations dismissed emissions trading in sulfur and nitrogen dioxide. It sounded to me (and later proved) to be a very good idea.

But it was November 1989 when the penny finally dropped. Not only were communism's appalling human crimes bared for the entire world to see, but its environmental ones were as well. The day the Berlin Wall came down, I recalled a conversation I had a few years earlier on an airplane with a prominent British pop star (now a respected leftist politician) about how happy East Germans really were under communism and how much freer and more sustainable their lives were than those of Americans. He'd been there. He knew. I resolved the day the Wall came down to stop tolerating such excuses for all forms of state domination.

Ten years later I was plowing a lonely furrow as a pro-environment, but pro-market, newspaper columnist in Britain. My stance baffled people. I met (and still meet) absolute incredulity rather than opposition from state-employed conservationists. It

is not that they think command-and-control is the only way to conserve; it's that they have never even considered an alternative—never imagined markets generating incentives. Grimly they repeat the mistakes of Gosplan (the committee for economic planning in the Soviet Union), wondering why their central planning, nationalization, and confiscation of people's interest in wildlife and amenity doesn't seem to generate enthusiasm.

Here is an example. To convert a barn into a house in Britain today you must survey it for bats before you apply for permission to convert. The bat survey must be done by an "accredited" bat group and only in the summer months. Guess what? Bat groups



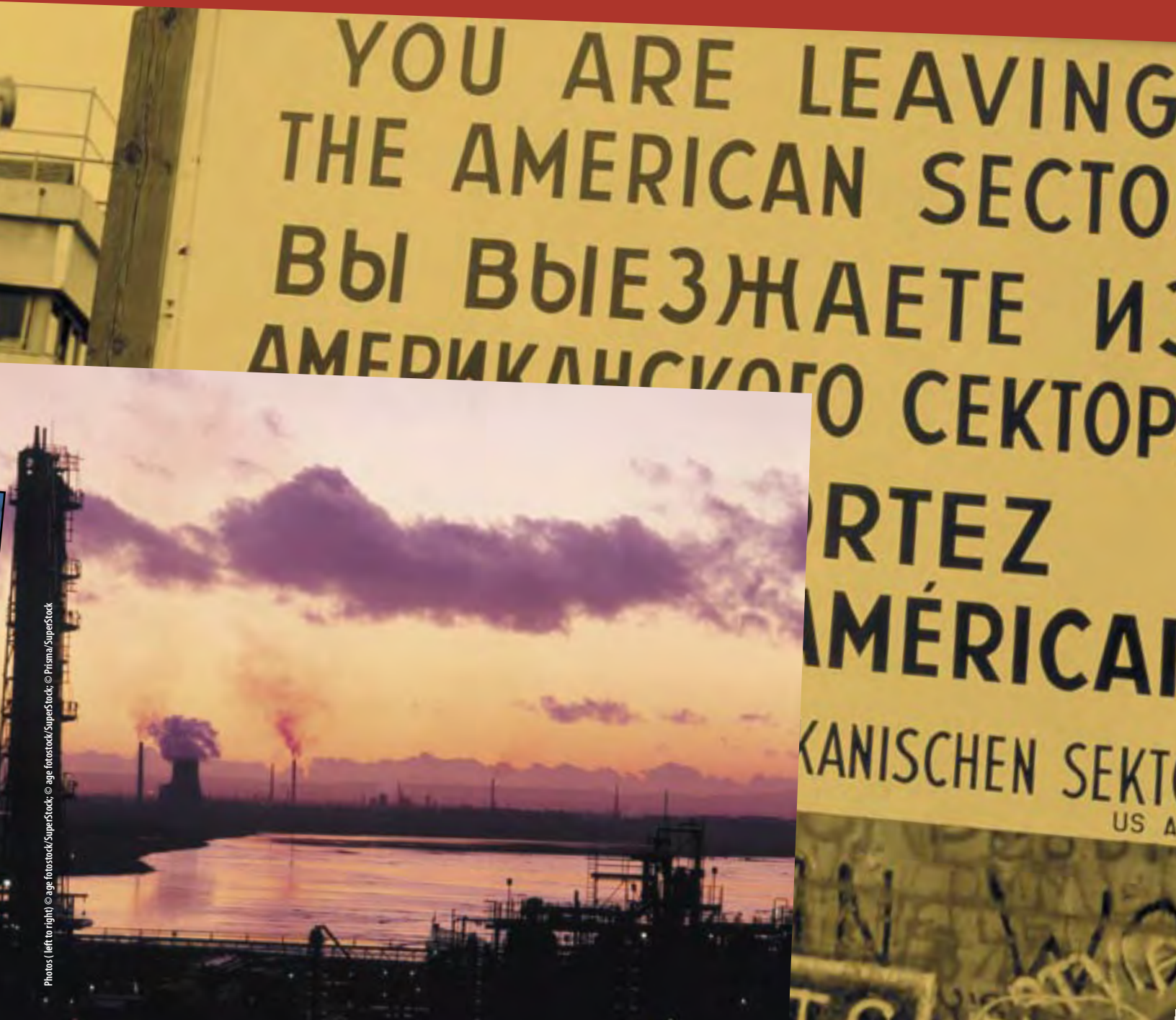
are very busy in the summer and charge very high fees. If the survey says there are rare bats in the building you may be refused permission to convert; as it turns out, the bats, not you, own the building. So what happens? People respond to incentives. Most barn owners resent and detest bats—I'm told playing Wagner at full volume clears a building of bats in short order. A simple scheme of small tax rebates for owners of barns who add bat-roosting boxes to their houses would achieve good will as well as bat babies. But it would not make paid work for bat groups.

PERC inspired me to see the world differently. The vision of free market environmentalism is inspiring because it is optimistic,

and the solutions it suggests are voluntary, diverse and (for the taxpayer) cheap. The only things standing in its way are vested interests of politicians, bureaucrats, and pressure groups.



MATT RIDLEY received a doctorate in zoology from the University of Oxford before commencing a career in science journalism. Ridley worked as a science correspondent for the *Economist* and the *Daily Telegraph* and is the author of several acclaimed works including *The Origins Of Virtue* (1997), *Genome* (1999), and *Nature Via Nurture: Genes, Experience, and What Makes us Human* (2003), also later released under the title *The Agile Gene: How Nature Turns on Nurture* (2004).





FROM FARM TO FME

By Vernon L. Smith

Growing up on a farm in Kansas provided an invigorating childhood—learning about crops and animals, befriending pet chickens, and shooting rabbits for dinner with an 1890 vintage lever action 12-gauge Winchester. My early interaction with the “environment,” coupled with the ideas associated with free market environmentalism (FME), which were so eloquently put forth in Terry Anderson and Don Leal’s book, helped shape my thinking about natural resource policy.

Life on the farm provided ample opportunity for lessons in “how things work”—an interest I have carried throughout my life. My family had a direct incentive to tend to our gardens, grain crops, and well pumps if we wanted to eat and drink. I quickly learned that one cannot ignore the important role of incentives in guiding human behavior. Similarly, Anderson and Leal pointed out that the famed conservationist Aldo Leopold learned through first-hand knowledge from working his Sand County farm in Wisconsin that incentives or rewards for private landowners lead to the best environmental outcomes. Thus, “Conservation will ultimately boil down to rewarding the private landowner who conserves the public interest” (Leopold [1934] 1991).

Traditional thinking about environmental issues tends to emphasize incentive problems inherent in markets but ignores them in the context of political processes. Many economists and policy analysts assume that an efficient allocation of resources will be reached when government correctly accounts for the costs and benefits. *Free Market Environmentalism* challenged this presumption and provided a more realistic way of thinking about environmental policy—a way that emphasized the important role of incentives, transaction costs, and well-defined property rights to natural resources. These rights, whether held by individuals or a group, create inherent incentives on resource users because the wealth of the property owner is at stake if bad decisions are made.

This theory, the foundation of FME, was pioneered in the early 1980s. When it was expanded upon in Anderson and Leal’s book in 1991, a reviewer called the title an oxymoron, saying the authors were the moron part. Market failures were seen as the cause of environmental problems so how could markets solve the problems they caused? Furthermore, early renditions of FME focused on hypothetical examples



of how environmental markets might work in theory not reality.

Thanks in a large part to the work of Anderson and Leal, today FME has overcome much of the early opposition. This is not because environmentalists have become fans of Adam Smith, but because real world applications by private individuals getting the incentives right are working and the case studies to support them are being documented. Defenders of Wildlife, for example, applies the tenets of FME to its wolf compensation plan; Oregon Water Trust uses water markets to purchase or lease water for fish habitats; and the World Wildlife Federation launched the CAMPFIRE program in southern Africa to reward native villagers who conserve elephants.¹

We have traveled a long way down the FME path since the release of *Free Market Environmentalism* but there is still a long way to go. Problems such as water allocation, wildlife preservation, and land conservation offer tremendous opportunities for using markets to improve the environment. Moreover, the environment is continually offering new frontiers as we discover new services from natural resources and place higher values on environmental amenities. I am

perpetually hopeful that we can continue to break the regulatory fist of command-and-control planning, which requires information unavailable to government planners, and replace it with a greener invisible hand guided by information from the marketplace.

NOTE

1. In addition to cases cited in *Free Market Environmentalism*, more examples can be found in *EnviroCapitalists* by Terry L. Anderson and Donald R. Leal (1997, Roman and Littlefield Publishers).

REFERENCE

Leopold, Aldo. [1934] 1991. Conservation Economics. In *The River of the Mother of God and*



VERNON L. SMITH was awarded the 2002 Nobel Prize in Economics for his pioneering work in experimental economics. Smith is a professor of economics and law at George Mason University, and research scholar at the Interdisciplinary Center for Economic Science.

IMPRESSIONS

Compiled by Carol Ferrie



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Fifteen years ago, an academic publisher quietly released *Free Market Environmentalism* by Terry Anderson and Don Leal. At the time, few mainstream environmentalists or politicians saw the book. But since its publication, free-market environmentalism spurred a quiet revolution in environmental policy. Now its views and policy approaches are starting to be taken seriously in policy circles... No matter where you fall on the political spectrum, free-market environmentalism offers some interesting approaches to perennial problems.

—Max Borders

Media Coordinator, Civitas Institute of North Carolina and
Adjunct Scholar, National Center for Policy Analysis

In the early eighties, economists and others who favored free market ideas for managing environmental assets could hold an annual meeting in a mini-van—with room to spare for their fishing gear. At the time, most smart people felt FME was a rather quaint set of ideas that would go nowhere. Now, FME is a major ingredient in the clash of ideas that forms new policy. The world understands that incentives matter and that valuable natural resources need to be managed with owner-like concern.

—Bruce Yandle

Dean Emeritus, Clemson University

Terry and Don's book was prophetic in promoting conservation strategies that are now in vogue. PERC's emphasis on market-based approaches reflects trends in many non-profit organizations and public agencies to place an economic value on nature, using terms such as "ecosystem services" and "natural capital." The conservation movement in this new century needs the market-based policy perspective that Terry and Don recognized long ago.

—Paul Bauman

Principal Gifts Team
The Nature Conservancy

Terry Anderson and Don Leal's *Free Market Environmentalism* was and still is a landmark book for all of us that love the outdoors and believe in the principles of entrepreneurship in our country. FME has stood the test of time and continues to be a guiding light. Congratulations, guys ... you ROCK!

—Chuck Leavell

*Charlane Plantation and Evergreen Arts
Keyboardist, The Rolling Stones*

Fifteen years ago Terry Anderson and Don Leal were taking ideas that were outside the pale of public discourse, and using scholarship and entrepreneurial endeavor to inject those ideas into important policy decisions, affecting not only the West but the nation. The wonderful thing to behold since the publication of *Free Market Environmentalism* is that these ideas are now a national force to be reckoned with, adding a unique and truly vital perspective on environmental policy.

—William (Chip) H. Mellor

*President and General Counsel
Institute for Justice*

This book (*Free Market Environmentalism*) belongs on the bookshelf of every manager at the EPA.

—David W. Schnare, Esq. Ph.D.

*Senior Fellow
The Thomas Jefferson Institute for Public Policy*

Having the thorough, thought-provoking research of PERC allows journalists to explore ideas that tell the bigger picture. It's interesting that they often contradict what many "environmental" groups claim is "truth" that our forests are disappearing or that bald eagles are becoming extinct. PERC reminds the movers and shakers of the world that free market principles apply to our natural resources, too.

—John Stossel

*Anchor
ABC News 20/20*



FREE MARKET ENVIRONMENTALISM

Can be purchased
directly from:

Pacific Research Institute
www.pacificresearch.org

A EUREKA MOMENT

By Thomas J. Bray

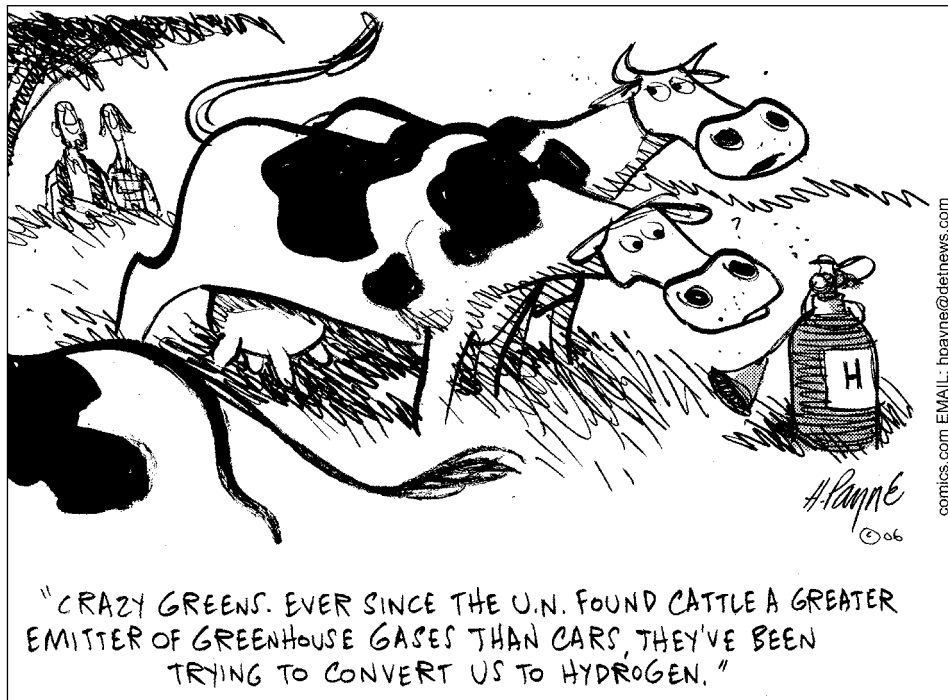
For a good chunk of my journalistic career, I thought of myself as a fairly standard-issue newsroom liberal: government was noble, markets were suspect, and the duty of the caring journalist was to buttress those points.

But for some of us the 1970s were a time of rethinking. The Vietnam War had cast a large shadow over the idea that the “best and brightest” in government always had the answers. The economic stagflation of the era brought into question the Keynesian orthodoxies that I had been taught in college. And postwar liberalism was moving further and further left, even to the point of what some considered to be anti-American.

As a result, I began to read the editorial page of the *Wall Street Journal*, where I worked at the time, with new interest. Indeed, I accepted an offer to run its op-ed page, eager for a ringside seat and a chance to redefine the debates of the times. I had soon persuaded myself that there was much to the argument that what ailed America was not too much democratic-capitalism, but too little.

Except, perhaps, on the subject of the environment, where I could still see no alternative to government intervention in order to rectify the “failures” of the marketplace. In the early 1980s, however, I began hearing about PERC, a small think-tank in Montana. PERC was started by a group of economists who were using property rights and markets, rather than regulation, as the prism through which natural resource issues could be best addressed.

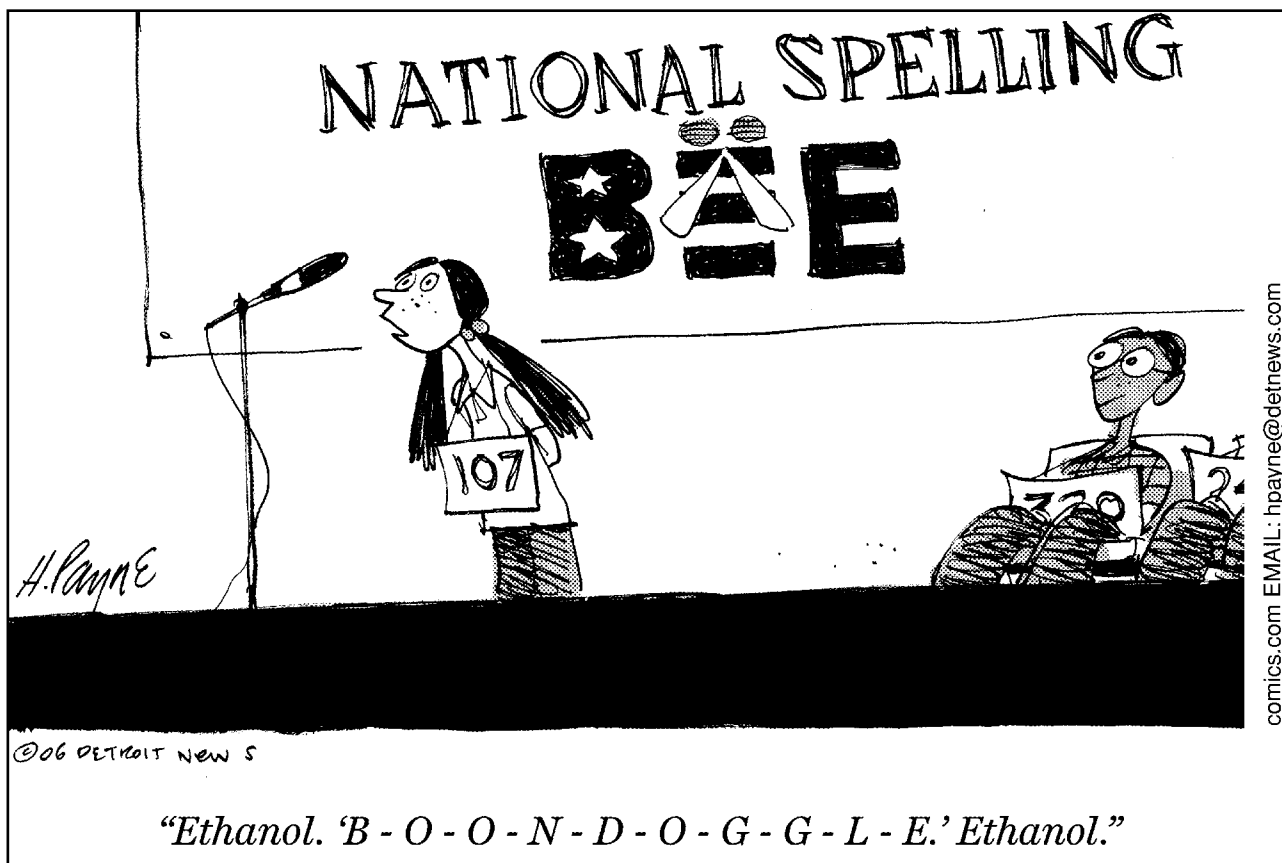
Like Matt Ridley (see article in this issue) and others, I attended one of PERC’s annual conferences for journalists and it was a eureka moment. There might be such a thing as market failure, they conceded; but they made a powerful case that an even bigger problem might be “government failure.” Furthermore, they offered cogent reasons to think that markets could be the friend, rather than the enemy, of the environment.



Those ideas eventually came together 15 years ago in a slim, readable book, *Free Market Environmentalism*, by Terry L. Anderson and Donald R. Leal. This book traced how FME, as it is called, had already proved useful in addressing issues of public land management, water scarcity in the West, and depletion of ocean fisheries. FME provided an instant rallying point for other scholars and activists increasingly disenchanted with an environmental movement which, in tune with the prevailing zeitgeist, was itself moving further and further left. And it gave journalists an alternative paradigm to ponder as they tried to sort out increasingly hysterical claims that everything was running out and generally getting worse.

In a 2001 “leader,” for example, the *Economist* magazine noted that, “Slowly but surely, governments around the world are rethinking the command-and-control approach. This could prove nothing short of a revolution.” In a 2004 *Baltimore Sun* article about a plan by the state to sell off some public land, the reporter ventured the heretical thought that “private ownership of land is not necessarily incompatible with preserving Maryland’s rural landscape.” And ABC’s John Stossel, co-anchor of “20-20,” has vigorously challenged environmental “fear-mongering” and the efficacy of government environmental regulation.

The command-and-control model remains dominant. But FME is, after all, still in its infancy. Fred Smith of the Competi-



“Ethanol. ‘B - O - O - N - D - O - G - G - L - E.’ Ethanol.”

tive Enterprise Institute, another center of free market environmental thinking, points out that the Progressive movement of the early twentieth century—with its emphasis on the ability of government experts to devise “wise uses” of natural resources on public lands—tended to inhibit development of market responses to many pollution and resource issues. It takes years, even decades, for new ways of thinking to assert themselves.

One parallel might be welfare reform. It was 16 years after the publication of Charles Murray’s best-selling *Welfare and Poverty* before the first significant legislative reform of the welfare system was enacted.

Experience tends to be the best teacher. Such homegrown boondoggles as Superfund, as well as the chemical-scare-of-the-month tactics of the environmental left, have done much to undercut the credibility of the modern environmental movement. Several committed “Greens” were even moved to pen a lengthy essay titled “The Death of Environmentalism” a few years ago, lamenting the degree to which environmental organizations had come to be viewed by the public as just another “special interest.”

There is growing respect for property rights at the grassroots level, as evidenced by the recent rash of referendums forbidding government takings of property for private use. (Though it should be noted that several referendums, which also sought to ban “regulatory takings,”—one of the major tools of traditional environmentalism—were defeated.)

Meanwhile, and perhaps not coincidentally, Greens have shifted the argument away from traditional environmental concerns to vaguer but even scarier-sounding threats such as global

warming. Democrats are trying hard to make global warming a legislative priority in the current Congress, and many Republicans seem inclined to go along. If they succeed, it could lead to massive government intrusion in the economy.

The expensive realities of trying to deal with such presumed threats, well before any actual danger has manifested itself, are likely to prove daunting; and even there, FME has much to offer. In *Free Market Environmentalism*, Anderson and Leal argued that, to the extent that human-caused climate change is a real threat, property rights, markets, and new technology offer better strategies for dealing with it than government dictates.

They argued for an array of reforms that included ending subsidies for beach-front development and farming in dry areas, so that individuals have incentives to adapt to climate change. They also suggested that technologies were within reach to develop such mechanisms as chemical “tags” that would allow monitoring of carbon emissions—a crucial first step toward establishing “atmospheric property rights.”


Where property rights are present, effective incentives can be constructed to minimize pollution. Pipe dreams? Perhaps. But we know one thing about property rights and the other institutional foundations of a market economy: they work. Is anybody proposing anything better?



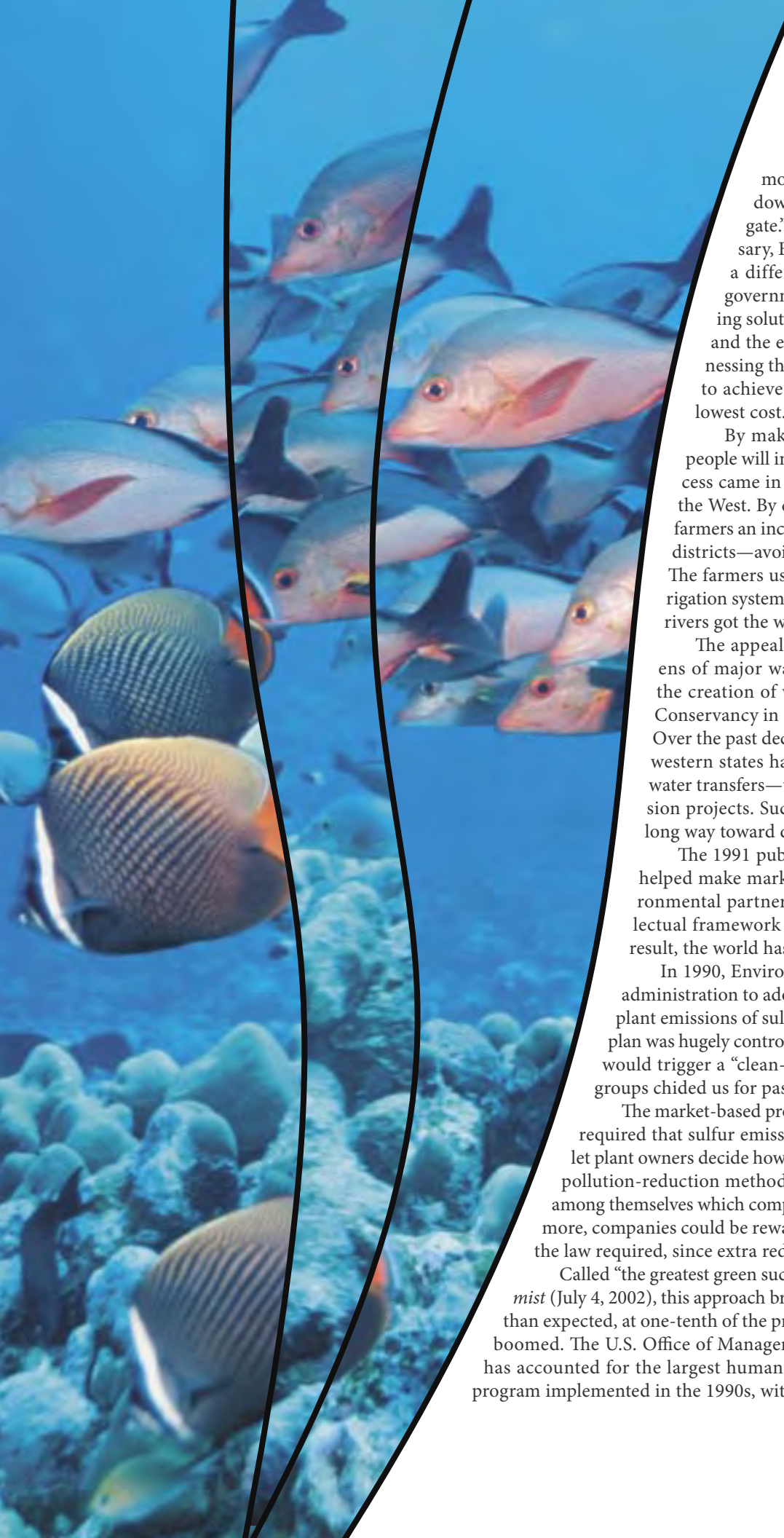
THOMAS J. BRAY is former editorial page editor and columnist for the *Detroit News* and other publications. He currently writes freelance articles on environmental issues.

Tapping the market for a cleaner environment

By Fred Krupp



By making environmental protection profitable, people will invent ways to make it happen. By creating a market for water rights, we gave farmers an incentive to conserve water and sell it to urban districts—avoiding new dams on California’s wild rivers.



The strategy of the early environmental movement, according to some, could be boiled down to three words: “mandate, regulate, litigate.” Although we still go to court when necessary, Environmental Defense has long advocated a different approach: working with businesses, government, and private landowners to craft lasting solutions. Consistent with the findings of PERC and the experience of Environmental Defense, harnessing the power of the market is often the best way to achieve the greatest environmental benefit at the lowest cost.

By making environmental protection profitable, people will invent ways to make it happen. Our first success came in the 1970s, tackling the water shortages in the West. By creating a market for water rights, we gave farmers an incentive to conserve water and sell it to urban districts—avoiding new dams on California’s wild rivers. The farmers used their profits to install more efficient irrigation systems and increase productivity, while cities and rivers got the water that was saved on the farms.

The appeal of this “win-win” outcome spurred dozens of major water trades across the West and spawned the creation of water trusts, such as the Deschutes River Conservancy in Oregon, to buy water for the environment. Over the past decade, Arizona, Colorado, Nevada and other western states have reformed their water laws to facilitate water transfers—taking the pressure off new dam and diversion projects. Such economic common sense will take us a long way toward defusing the West’s water crisis.

The 1991 publication of *Free Market Environmentalism* helped make market-based approaches and corporate-environmental partnerships mainstream by providing the intellectual framework and supporting data for these ideas. As a result, the world has certainly changed.

In 1990, Environmental Defense persuaded the first Bush administration to adopt a cap-and-trade system to halve power-plant emissions of sulfur dioxide, a major cause of acid rain. The plan was hugely controversial. The utility industry insisted the cuts would trigger a “clean-air recession,” while many environmental groups chided us for passing up old-style mandates.

The market-based program, written into the 1990 Clean Air Act, required that sulfur emissions be reduced overall by 50 percent, but let plant owners decide how to do it, which created competition among pollution-reduction methods. The plan also allowed owners to decide among themselves which companies would make the reductions. Furthermore, companies could be rewarded for reducing emissions by more than the law required, since extra reductions could be banked or traded.

Called “the greatest green success story of the past decade” by the *Economist* (July 4, 2002), this approach brought sulfur dioxide emissions down faster than expected, at one-tenth of the predicted cost. Meanwhile, the economy has boomed. The U.S. Office of Management and Budget found that the program has accounted for the largest human health benefits of any federal regulatory program implemented in the 1990s, with annual benefits exceeding costs by more

than forty to one. The problem of acid rain has not yet been solved, but the emissions reductions already achieved demonstrate the effectiveness of the cap-and-trade method.

By setting the cap, the government *de facto* created quasi-property rights in the form of emission allowances. This is similar to what government (mostly states) did more than 100 years ago by establishing rules by which farmers and others “own” water rights that now underpin water markets.

Today, market-based approaches such as water marketing, congestion pricing, and cap-and-trade systems have proliferated and gained wider acceptance. Cap-and-trade programs, for example, have been introduced in some states to curb nitrogen oxides and non-point water pollution. Even the Chinese government has embraced this approach to cut sulfur dioxide emissions.

A partnership between PERC and Environmental Defense, resulting in research documenting the efficacy of a cap-and-trade program applied to fishery management, contributed to Congress’ recent revision of the principal U.S. fisheries law, the Magnuson-Stevens Act. This approach, already in place in the Pacific halibut and Gulf of Mexico red snapper fisheries, typically assigns each fisherman a tradable share of the total allowable catch. As a faltering fishery recovers, the tradable shares rise in value, giving anglers a financial stake in conservation.

Such methods work when the government does what it alone can do—sets and enforces a strict environmental standard—and then lets businesses, investors, and entrepreneurs discover the most cost-effective ways of meeting the standard. When reductions in pollution are cheaper, stronger environmental goals can be set, and the environment and the economy both gain.

Looking forward, the market offers tremendous promise to slow global warming, one of the most challenging environmental problems of all time. In the United States, the idea of using markets to cut carbon dioxide has gained traction, spurring new investments in alternative energies, including low-carbon biofuels. People now understand that creating an open field for the broadest bloom of innovation is a better approach than passing the kind of legislation that anoints a few fixed technologies. Already, states from Maine to California are pursuing this market approach.

As we create a market value for reductions in carbon emissions, we harness the energy of entrepreneurs and engineers to turn dreams into working solutions. America must unleash the full power of innovation by passing a national carbon cap—with a real market for trading. No single act will do more to end our addiction to fossil fuels, promote energy security and get America back in the game of inventing clean technologies the world needs. With proper government oversight, Adam Smith’s invisible hand can indeed have a green thumb.



FRED KRUPP is president of Environmental Defense, a national nonprofit organization that links science, economics, law and innovative private-sector partnerships to create breakthrough solutions to the most serious environmental problems.

Visit www.environmentaldefense.org





POLITICS & ENVIRONMENT

Do single-issue voters matter? Recent evidence suggests that, when the issue is the environment, the answer is “yes.” Examining gubernatorial election returns for the last 30 years of the twentieth century, John List and Daniel Sturm (2006) have found that electoral incentives are an important determinant of environmental policy choices. When governors are subject to electoral discipline, they enact environmental policies more closely matched to the wishes of their constituents. But when term limits make them lame ducks, those same governors are apt to ignore the wishes of the electorate and instead act according to their own preferences. Simply put, when it comes to the environment, politicians pander

For purposes of their analysis, List and Sturm begin by characterizing states as either “green” or “brown,” depending on whether a relatively large or small proportion of residents belong to three leading environmental groups: Greenpeace, Sierra Club, and the National Wildlife Federation. The greenest states include most of those in the northeast (with Vermont the greenest of all), plus California, Oregon, and Colorado. The brownest states are clustered in the southeast, ranging from South Carolina over to Texas. Montana happens to fall on the brown side of the environmental dividing line, which is probably not unreasonable for the period under study (1970–2000).

To measure the environmental stance of a governor, the authors use state expenditure data on fish and game, forests and parks, and on other natural resources. Higher spending levels on these items are taken as evidence of a more pro-environmental policy stance. The authors also examine other potential measures of gubernatorial environmentalism (such as the costs of complying with state environmental regulations) but the empirical results do not differ appreciably, regardless of the measure used.

There are three key findings. First, environmental policy differs substantially between years when the governor is eligible to run for reelection, compared to years when term limits prevent that. Second, this policy-switching takes on a well-defined pattern. In green states, governors sharply curtail environmental spending once they are term-limited, while in brown states they substantially increase such spending when they are no longer subject to the discipline of the ballot box. In effect, regardless of the political party of the governor or the underlying preferences of the electorate, the pattern is the same: Governors shape their environmental policies to fit the preferences of voters when they are subject to voter discipline, and shape those policies to suit their own preferences when such discipline is removed.

The final key result is that the degree of policy-switching (or environmental pandering, if

you prefer) is directly related to the degree of competitiveness in the electoral process. Governors who won handily in the last election are less likely to shape their policies to fit the preferences of single-issue environmental voters. In contrast, when elections are likely to be close, governors are willing to deviate the farthest from their principles to get the votes of those who feel the strongest, one way or the other, about the environment.

The spending swings that occur as governors shape their policies to fit their electoral circumstances are substantial. And not surprisingly, the biggest movements are found where elections are highly competitive, because that is where governors do the most pandering. For example, in brown states where gubernatorial elections have been close, term-limited governors increase environmental spending by almost 10 percent in their final term. In highly competitive green states, term-limited governors slash environmental spending about 20 percent during their final term. In both cases, the spending changes are almost exclusively reallocation of spending priorities: the environmental budget cuts get spent on other programs, while the environmental spending increases come out of other existing program budgets.

One striking implication of these findings has to do with the channels of political influence. It is commonplace to bemoan the excessive influence of campaign contributions on electoral outcomes, and to use this supposed influence as justification for restricting competition along such lines. But in the case of environmental electioneering, according to List and Sturm it does not seem that campaign contributions are the central issue. Gubernatorial campaign contributions from the top environmental groups amount to but 2–3 percent of what electric utilities or oil and gas companies give in such elections. Despite this, the evidence in this paper shows that environmental issues are clearly responsible for substantial policy swings by governors, presumably because these issues resonate strongly with single-issue environmental voters.

In addition to illustrating the importance of environmental issues in elections, this study sheds light on the impact of term limits. There are many reasons offered for these caps on service in elected office, one of them being that by bringing fresh blood to office, they make politicians more responsive to the wishes of the people. Based on the evidence in this study, term limits in fact insulate politicians in their final terms from their responsibilities to the electorate. All the more reason, I suppose, to be careful about for whom you vote.



REFERENCE

List, John A., and Daniel Sturm. 2006. How Elections Matter: Theory and Evidence from Environmental Policy. *Quarterly Journal of Economics* 121(4): 1249–81.

DANIEL K. BENJAMIN is a PERC senior fellow and Alumni Distinguished Professor at Clemson University. This column, "Tangents," investigates policy implications of recent academic research. He can be reached at wahoo@clemson.edu.



FREE MARKET Environmentalism

Private property rights that hold people accountable and markets that communicate human values and opportunity costs are the core of FME.

When Donald Leal and I wrote *Free Market Environmentalism* in 1991, we mostly theorized about how property rights and markets could enhance environmental quality. We focused more on political failures than market successes because there were more of the former than the latter.

Revising *Free Market Environmentalism* in 2001 illuminated the progress that had been made because incentives really do matter. In addition to land markets producing recreational amenities and water markets improving

water-use efficiency, “enviropreneurs” were contracting for wildlife habitat and instream flows. They were also reducing effluent by cleaning up dirty water and selling the clean results. As the marketing slogan for a septic tank company puts it, “Your effluence is our affluence.”

These FME success stories, with autonomous actors buying and selling private property rights, were not enough for skeptics. Seeing market failure behind every bush (pun intended), skeptics believe that Adam Smith’s invisible hand needs a helping hand from government.

The skeptics call for “market-like environmentalism,” which I’ll dub MLE. Compared to markets where resource owners decide how, what, when, and how much to produce, MLE starts with an outcome and proposes incentives—sometimes carrots and sometimes sticks—to get there. With MLE, a carbon tax is a market-based incentive because it raises the price of fossil fuel and encourages reduced consumption. Similarly, “cap-and-trade” approaches such as individual fishing quotas (IFQs) and tradable pollution permits are market-based because they work through trading.

While it is true that cap-and-trade approaches can

achieve some regulatory goals better than traditional regulations (as Leal’s work on IFQs shows), they still have many of the problems inherent in command-and-control. Proposed global warming policies provide an example. A carbon tax and tradable carbon credits presuppose that we know the appropriate amount of carbon to be emitted and whether achieving that level is worth the cost. Neither is the case. Unilateral reductions of carbon emissions by the United States will not reduce global temperatures. Indeed, if all countries met Kyoto targets, the commonly predicted 2° C temperature increase over the next century would be reduced by only 0.1° C. Combine this with the estimate from Britain’s recent “Stern Report” that meeting Kyoto targets would cost between 5 and 20 percent of world economic output forever, and you have goals that make no sense.

In contrast, FME relies on markets to signal benefits and costs of global warming and lets individuals respond to those signals. Higher insurance rates and cancelled policies for Florida homeowners send a price signal to coastal dwellers. Coastal land values will decrease if sea levels rise, and interior land values will increase if moisture and warmth make them more productive for agriculture. Such market signals will provide better information and accounting for benefits and costs than will MLE taxes and regulations.

FME has come a long way in showing how markets can provide environmental goods, but regulations aimed at global warming suggest that there is much farther to go. Dressing centralized regulations in MLE clothing doesn’t make them FME. Secure private property rights that hold people accountable and markets that communicate human values and opportunity costs are the core of FME, and they are as applicable to global warming as they are to land and water conservation.

On to the third edition!

In his “On Target” column, PERC’s executive director TERRY L. ANDERSON confronts issues surrounding free market environmentalism. Anderson can be reached at perc@perc.org.



Compiled by Linda E. Platts

Java lights your fire

On a snowy winter evening, there is nothing like a good book, an overstuffed couch, and a freshly brewed log on the fire. For those who don't have easy access to an ax and a forest, the local supermarket typically has plenty of artificial logs made from sawdust and paraffin that will burn warm and bright in your fireplace. But leave it to crafty inventors to come up with an alternative—and probably a better one.



Rod Sprules, an engineer with extensive experience in product development, made the first java log by packing an empty cigar tube with dried coffee grounds and lighting it at the dining table. He and his wife watched in fascination as it burned brilliantly with very little smoke.

And thus it began. The *New York Times* reports that Sprules's engineering textbooks confirmed that coffee grounds have 25 percent more energy capacity than wood, 96 percent less residue after combustion, 85 percent less carbon monoxide, 86 percent less creosote deposits, and 31 percent less particulate matter.

Combine those hard numbers with the coffee houses that are springing up on every corner and the fact that coffee is one of the world's most widely traded commodities, and Sprules knew he was onto something.

Thus began a long process of tinkering in the garage and dumpster-diving for coffee grounds as well as seeking a financial backer. In the long run, it all paid off with the creation of the Java-Log, which earned enthusiastic reviews from the likes of *Time* magazine. The log produces brighter, higher flames than the typical sawdust log, emits more heat, and burns for approximately the same length of time. It has a slightly sweet aroma—not the soothing scent of hot java, but not the chemical odor that comes from some artificial logs.

Aside from the aesthetic values of the Java-Log, it also puts coffee grounds to good use and keeps both the air and your chimney cleaner than if you were burning wood products. Sprules is currently getting all of his coffee grounds from a freeze-dried coffee manufacturer, but is negotiating with Starbucks and Krispy Kreme for their used grounds.

Although the logs are 50 cents to a dollar more than their sawdust counterparts, they satisfy java drinkers who like to see their coffee grounds reused while providing bright flames in the fireplace. For those who can't find a Java-Log nearby, order online at www.java-log.com.

Turkey fryer leftovers power a revolution

If you like the scent of cooking turkey, you would probably like living in Plano, Texas. Although not widely appreciated, or even heard of in other parts of the country, many folks in the South like their turkeys deep-fried—usually done in a 40-quart deep fryer filled with peanut oil. Now, that much leftover oil could leave local garbage trucks in a sticky situation, but Plano city officials developed a plan.

A growing number of the city's 700 vehicles cruise the streets on bio-fuel, according to the *Houston Chronicle*. So, when residents finally push back from the table, they call for a pickup and all that turkey fryer fat is carted off to Biodiesel Industries. Eventually, it ends up powering the city's fleet while avoiding carbon emissions and unstable high fuel prices. It's enough to make residents want to celebrate with a turkey dinner and all the fixings.



Workers adapt to a snail's pace

Life has never been easy in the poor Western Cape township of Vyeboom, South Africa. Yet many illiterate, rural people migrated there from Eastern Cape Province seeking work picking fruit. Instead, they have found a promised land, of sorts, picking snails. Farmers in the area are inundated with the slithering, drooling snails, which they consider to be pests. Removing them from their orchards and fields is a huge, but essential task. The *Los Angeles Times* reports that these little fellows are merely common brown garden snails, which become a tasty treat when served in bubbling garlic butter—not to be confused with the prized Burgundy snails known as escargots in France. Despite their yeoman status, the brown variety is still a prized morsel for many European diners.

Workers who earned less than \$30 a month in Eastern Cape now make four times that much by collecting the snails for Eleanze Industries, a small local company that sorts, cleans, bags, and chills the snails for export to Europe. The firm also is attempting to introduce them to local people as a high calcium, low-fat (no garlic butter) food source. While most of the pickers shudder with revulsion at the thought of eating the slimy creatures, a few have braved the dining experience and report the snails are quite palatable.

Farmers are delighted to be rid of this traditional pest, and workers are benefiting from higher salaries and possibly more food. Meanwhile, a new industry is providing more jobs to local workers and expanding its business. Except for the snails, it appears to be a win-win situation for all concerned.

Urban trees leave a legacy

In Eugene, Oregon, the number of trees that are cut down each year goes largely unnoticed. They suffer from a variety of conditions such as disease, rotting of trunks and roots, old age, and others that make them hazardous to city dwellers if the big “fellas” take a tumble onto homes, cars, streets, or sidewalks. Seth San Filippo, owner of Urban Lumber Co., has come to see them as a resource rather than a liability and built a thriving company around urban trees.

In the past, after their leafy canopies were gone, most homeowners had the trees cut for firewood, chipped or mulched, says the *Eugene Register Guard*. Now, a new attitude prevails. One homeowner called San Filippo after a giant maple fell over on his property. He asked to have the tree hauled off and the lumber milled for cabinets in his home.

The salvage operation makes all kinds of specialty lumber from the city trees. While the value of the wood varies according to size and type, it has been used as flooring, furniture, mantles, and musical instruments. On San Filippo’s Web site (www.urbanlumbercompany.com), he states that 4 billion board feet of lumber goes to waste each year in the United States because cities and landowners do not salvage the usable parts of trees that are diseased or blown down.

In one Eugene neighborhood, a 100-year-old tree that had outlived its years left behind an unusual legacy. Local homeowners organized a ceremony honoring the old tree and planted new ones that eventually will replace the old giant. And the tree itself yielded 1,500 board feet of lumber that will live far into the future.



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