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COVER STORY

The story is the same around the world: Local decisions are usually based on better information than decisions imposed from on high. Above, in Bhimeshwar, Nepal, members of a local forest users' group meet with government officials to discuss forest management.

FROM THE EDITOR

Moving toward Markets

"Local control" is a watchword for free market environmentalists, as it should be. That's because people who are near one another often find that voluntary transactions can solve environmental problems. And even if that doesn't happen, local information improves the quality of decisions. The benefits are just as real in Asia as they are in the United States. In this issue of *PERC Reports*, Trupti Parekh Mehta tells us about the benefits slowly emerging now that the national governments of India and Nepal are turning some control of forests over to local groups.

Mehta's report stems from her work for ARCH (Action Research in Community Health and Development), a nonprofit organization located in a small town in the state of Gujarat, India. She analyzed her findings last year when she attended the first Kinship Conservation Institute (KCI), a month-long program for environmental leaders sponsored by PERC and the Kinship Foundation.

The Kinship Conservation Institute, by the way, enters its second year this month. Directed by PERC Senior Associate Bruce Yandle and Clemson University economist Robert McCormick, this innovative program held at the Montana State University campus in Bozeman is designed to help early-career conservationists understand and act upon market principles. Carol Ferrie, who joined PERC last October, coordinates KCI (see www.kinshipconservationinstitute.org).

Another topic in this issue of *PERC Reports* was sparked by the Senate decision in April to prohibit oil drilling in ANWR. That led to some soul-searching on the FME Roundtable, an e-mail list-serve for free market environmentalists. We have reproduced (with permission) some of that conversation.

We also write about "enviro-capitalists" Tom and Mary Kay Milesnick, whose Montana ranch raises cattle and protects trout. The author is Kris Kumlien, a Montana State University student who served as a PERC intern last year and who has just returned from working for a semester in Washington, D.C.

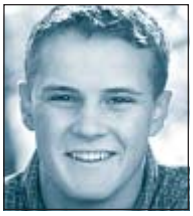
At press time, there was still snow in Montana but elsewhere the U.S. Forest Service was already fighting fires. In this issue, Roger Sedjo, a former PERC Julian Simon Fellow and a widely published expert on forestry, explains that the fires reflect deeper problems in the agency.

Finally, our readers will find the regular columns, "Tangents" by Daniel K. Benjamin (this time on interstate trading of trash and efforts to curtail it), and "Greener Pastures," prepared by Linda Platts, with some help from our editorial intern Sam Westlind.

Jane S. Shaw

From left: Mehta; Ferrie; Sedjo; Kumlien.



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Cover photo: Trupti Parekh Mehta

COMMUNITY FORESTRY IN INDIA AND NEPAL

Reversing Degradation from Years of National Control

By Trupti Parekh Mehta

Alarmed by massive loss of forest cover, and under pressure from environmentalists, the governments of India and Nepal began to decentralize forest management in the late 1980s. The process has a long way to go, but there are signs—in Nepal and two Indian states—that control by local communities may be reversing the tragedy of government control of forests.

Wherever forest lands have been handed over to user groups, the vegetative cover has improved dramatically, even where the land has lost its trees and is severely eroded. Just by looking at the area, I could predict whether it was locally or nationally managed.

In 2000, I visited about twenty villages in Nepal and the Indian state of Gujarat. I found that wherever forest lands are handed over to user groups, the vegetative cover has improved dramatically, even where the land has lost its trees and is severely eroded. Just by looking at the area, I could predict whether it was locally or nationally managed. "One can see the difference between the community forests and other forests," K. B. Shrestha, Director-General of Community and Private Forests, Ministry of Forests and Soil Conservation, told a reporter for *Down to Earth*, a magazine published in Delhi.

For example, grazing too many cattle can stunt the regeneration of forests. With the new steps toward local control, people have begun to reduce the number of livestock they graze and have initiated stall feeding. I was told in Kande in Pokhara, Nepal, that the cattle population has been cut in half. "We have voluntarily disposed of our cattle because now we are confident that whatever more will be produced in the forest would belong to us. So now we are more responsible toward growth of forest. We have seen with our own eyes the wonderful results of natural regeneration."

Both India and Nepal have a wide variety of forests, ranging from tropical forests to sub-alpine scrub forests in the Himalayas. For centuries, these forests have provided people with timber, fuel, and fodder for cattle. At one time, use of the forests followed traditions of local community control. These were disrupted when national governments took over and local communities lost incentives for stewardship. What was once a well-regulated common resource became a free-for-all open-access resource, although nominally under the control of the national government. These forests have been severely degraded as a result.

In India, national control goes back to the 1860s, when the British nationalized all India's forests, taking away traditional rights and privileges of the local communities with a stroke of a pen. After independence, India's government maintained and even strengthened colonial policies. The massive forest bureaucracy is still very powerful and resists the

devolution of power to the local communities.

In contrast, Nepal remained free from British colonial influence. However, it attempted to create a forest bureaucracy along the Indian model in the late 1940s and nationalized all private forests a decade later in 1957. In both countries, forests are logged primarily under contracts sold by the national government. Sale of wood by individuals is not permitted. However, since many communities depend on the forests, timber and fuel wood are sold clandestinely in nearby towns, often at very meager prices and sometimes in connivance with forest guards. A great deal of timber is cut, both legally through contracts and illegally under the patronage of higher forest officials and politicians.

The community forestry programs are designed to give communities a financial stake in the forest so that they have an incentive to preserve them. The master plan for Nepal's program, adopted in 1988, states that the forest administration should "allow people to have full control over the forests. . . ." The program, codified in 1993, goes farther than India's does in turning management over to local groups. Any national forest on which a community depends can be transfered to a Forest Users' Group (although proposed amendments may set some limits on which forests can change hands).

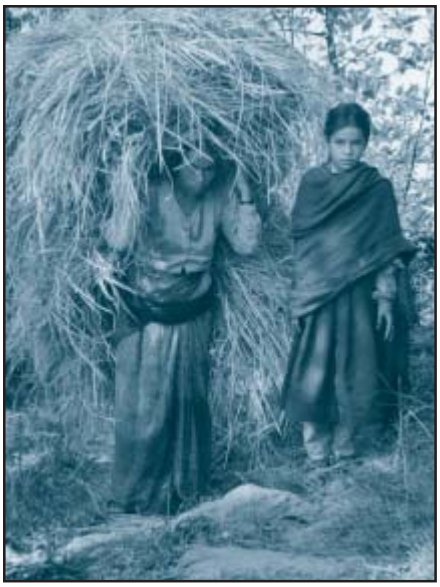
Nepalese Forest Users' Groups are independent corporate bodies, with powers to buy or sell property, to negotiate and sell timber, to hold separate bank accounts and transact independently, to punish offenders, etc. The groups receive 100 percent of the proceeds of a timber sale, and are required to spend it on village development and forest regeneration (although amendments may reduce the percentage). By 1999–2000, the government of Nepal had given control of 17 percent of the total forestland to Forest User Groups in 73 districts.

I found many success stories in Nepal. In Siranmati, a village in Dolkha, Nepal, I was told: "The surrounding hills you see were totally naked some twenty years ago. Then the Swiss agency planted these pine trees. But nobody was interested in its protection, because it was not ours. Now every household is involved in the protection."

The most striking feature of this turnaround is that it

Traditions of local community control were disrupted when national governments took over, and local communities lost incentives for stewardship. What was once a well-regulated common resource became a free-for-all open-access resource, nominally under government control.

Trupti Parekh Mehta



Trupti Parekh Mehta

User groups in Nepal instituted rules of conduct fine-tuned to local conditions—such as detailed rules for how much grass and fuel wood each household can collect, and when. Violators are fined.

came about without expensive intervention like planting or physical fencing. The user groups simply instituted rules of conduct that were fine-tuned to local conditions. In some cases, grazing is totally banned, while in others it is banned for specific time periods. Some villages employ watchmen, while in others, members of each household take turns as guards against violators. Detailed rules are set for how much grass and fuel wood each household can collect, and when. Violators are fined. The result has been natural regeneration of trees.

India's Joint Forestry Management program, established in 1990, does not go as far as Nepal's. Forest Officers, bureaucrats of the national government, can withdraw the program unilaterally without compensation. Joint management (that is, partial community control) is allowed only for forests that are already degraded. (An amendment allows good forests to be transferred but the conditions are so restrictive that this right is in effect denied.) Local committees have only user rights to fuel wood, fodder, and small timber, and only 25 to 60 percent of the net income reaches the committees. The program is not a statute, just a government circular, and therefore less binding. Overall, only 13 percent of the forests have been turned over to local communities in India.

Nevertheless, some important changes have occurred. According to a government report, in the Nizamabad district of Andhra Pradesh, 80 percent of the total forestland was given to Forest Protection Committees during 1993–95. Satellite images confirm that the dense forest area increased by 60 percent from 1996 to 1998. Similarly, there are reports from the Jhabhuwa district of Madhya Pradesh that the once denuded hills have turned green in a short span of four to five years.

In a few cases, the forests are beginning to generate income for the community. Another heartening feature is the evolving process of dispute resolutions by the groups through negotiations and discussions and with the help of nongovernmental organizations and, in Nepal, by a countrywide organization of users' groups. But much remains to be done. Even in Nepal, there is an attempt to backtrack on the government's commitment. In short, these policies are merely first steps in the right direction.

Trupti Parekh Mehta, a native of India, is a trustee and full-time activist for Action Research in Community Health and Development, a private nonprofit organization based in Mangrol in eastern Gujarat. This article is adapted from the paper Mehta prepared for the Kinship Conservation Institute in 2001.

WHY DID THE GREENS WIN?

A Symposium with Fred Smith, Jerry Taylor, Richard Belzer, Victor Porlier, and Kenneth Green

On April 25, 2002, the U.S. Senate voted to prohibit oil development in the Arctic National Wildlife Refuge. This defeat of oil drilling sparked a conversation in cyberspace among free market environmentalists. In these edited comments (published with permission), the participants explored why the opponents of drilling won and how free market environmentalists might convey their messages more effectively. The affiliations of the participants are listed at the end of this article.

Fred Smith: The energy bill, which currently prohibits oil drilling in the Arctic National Wildlife Refuge (ANWR), gives environmental activists much of what they wanted. It blocks oil development in most of the United States, it subsidizes noncompetitive energy sources, and it takes the first steps toward enactment of the Kyoto Protocol on global warming. It did little for free market approaches to environmental problems.

Why did the proponents win? Perhaps the greatest source of environmental activists' power is their ability to tap into the displaced religious values of the intellectual class. On ANWR, Congress voted to ensure that the moneychangers (read, energy firms) were driven from the temples of nature. Arguments about how much wealth was locked away in ANWR actually strengthened the Greens' position—sacrificing billions demonstrates morality, especially when the sacrifice is borne by others. (As we all know, when environmental activists own property, they act responsibly, sometimes drilling for oil). Free market proponents have created no counter-argument with equivalent appeal.

These "religious" values carry weight among the public, even though some polls indicate that environmental values rank fairly low on most people's priority lists. Because most people think that business will pick up the tab for environmental policies, they assume that they themselves will not have to pay the costs. Thus, it is easy to take these positions.

Another reason why the environmental activists won is that public opinion does not always hold sway; the link between popular opinion and actual policy is weak. America is not a pure democracy—we're an interest group democracy. Green campaigns, even when they lose, frighten businessmen and politicians into seeking accommodation, and they energize the environmental groups' membership base. The ANWR issue was wonderful for the Sierra Club. Thus, we have the seeming anomaly of environmental issues ranking very low when voters are asked to list priorities but a firestorm arising

when efforts are made to rethink the arsenic rule, to open ANWR, or to walk away from Kyoto. Politicians don't want to be on the "wrong" side of anything.

Jerry Taylor: Environmental groups have lobbying power only to the extent that they can convince legislators that a vote against Green interests will hurt them at the ballot box or, conversely, that a vote for a favored position will help them win votes. Environmental groups thus spend a great deal of time boasting of their electoral strength, commissioning polls, and demonstrating grassroots muscle. It is my contention that their true electoral strength in many districts is greatly overestimated. Ironically, going on and on about the invincible Green lobby makes the environmentalists' lobbying job easier.

Fred Smith: The real problem isn't the strength of the Greens, it's the weakness of property rights-based environmentalism. After more than a decade, we've gained only limited ground. Most people now view pollution taxes and emission quotas as the "market" solution. If that policy area becomes dominant, we will face even worse environmental policy.

Richard Belzer: How do you square the "greenness" in the energy bill with the absence of genuine awareness (much less, interest) in the public? A poll taken today would show less than 1 in 100 even knowing that there *is* an energy bill, never mind what's in it—green, brown or lavender.

I suggest that the phenomenon in question is cultural, not economic or political. And that's why the Greens' campaign succeeded, for they never had a chance on economic or political grounds.

Greens have changed how the public—superficially—looks at environmental issues, in large part by making it culturally unacceptable to disagree. That doesn't translate into individual action unless that action is free, paid for by others, or subject to cultural opprobrium. I am the only homeowner on my block who does not recycle. I get The Look, and many of the people giving me The Look don't care about the environment but they care very much how they are perceived by their neighbors. More and more people are now *pretending* to recycle—taking the blue boxes out to the curb with a few bottles and such but burying the rest in the Supercan where the neighbors can't see it.

Free market environmentalists have done a fine job of doing the research and laying out the arguments, but we have yet to find a way to engage the culture and challenge its green facade. Frankly, the FME culture overdoses on earnestness. Humor, satire, and parody have not been fully utilized here—even our jokes are too serious. We should lighten up.

Fred Smith: The question of lobbying power must be evaluated by considering how people arrive at their views on environmental policy. Are political judgments really the same as market choices? I think not. Market choices express values. But, as Richard suggests, political opinions have no consequences; there are no tradeoffs or sacrifices involved in merely expressing an opinion about recycling or saving ANWR. Political opinions relate more to cultural values. As some of you know, I've been working to extend the research that Aaron Wildavsky was involved in during the decade before his untimely death. Wildavsky sought to understand what explains the opinions people hold about things they haven't thought about.

Wildavsky believed that people's opinions about policies such as recycling reflect the way they perceive that policy affecting their values. To affect those opinions, we must find a way to frame our policies in ways that appeal to the disparate cultural values of our society.

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Wildavsky suggested four primary cultural values: Individualism (the value focused on freedom), which appeals to libertarians; Hierarchy (the value of order), which appeals to conservatives, business executives, and the religious community; Egalitarianism (the value of fairness)—the environmental laity and many liberals fall into this camp; and finally Fatalism (the value of "you can't fight city hall"). Fatalists aren't politically active—the other cultural groups are.

Consider a policy of mandatory recycling (Washington, D.C., has just decided to enforce its mandatory recycling law; individuals who fail to separate their trash will be fined $400 per offense). We know that mandatory recycling is wasteful and costly; how might one argue against this policy?

The Individualist argument would focus on the restriction of freedom of choice. The Hierarchical argument would focus on the costs of the program, the amount of police enforcement, the risks of increased littering. The Egalitarian argument would point out the difficulty of separating and storing wastes in low-income homes where rats and insects are already a problem, where space is at a premium, and where other demands are paramount.

These might not be the ideal ways to frame the arguments, but my point is that one needs a cultural values-based strategy to reach most people. This does not mean that we should neglect the policy analysis work, but as Richard notes we're pretty good at that part of the policy struggle.

Victor Porlier: Granting Wildavsky's groupings, and granting that messages appropriate to each could be effectively scripted, there is still a difficulty. What media would we use to persuade or even access one group without alienating the other groups who may be reading or viewing the message as well? Conceptually, I can agree that these viewpoint groupings exist, but in practical terms how would you determine which messages go into which media if most mass media are viewed by members of all the groups?

Jerry Taylor: My problem with this talk of a cultural war is that the focus seems to be on convincing people that they shouldn't value, or shouldn't want, or shouldn't prefer goods and/or services that they obviously do prefer. . . strongly.

First, is our movement capable of convincing millions of Americans that they shouldn't prefer wilderness in Alaska

over a slight drop in oil prices? Probably not, particularly since, as Richard Stroup has noted, demands for a cleaner environment correlate with rising personal wealth.

Second, is it a particularly libertarian position to argue with subjective preferences? Preferences for tundra—as for forestlands or wetlands—are subjective. Some people value them highly, whether for rational reasons or simply from a dewy-eyed romantic love for wild and desolate places. You can no more objectively establish that tundra isn't worth preserving than you can objectively establish that vanilla isn't worth eating.

Kenneth Green: I agree. I've long been leery of anyone who tries to tell the public what they should or shouldn't want, environmentally or otherwise. If the majority of the public keeps voting for pristine air and ever-larger wilderness areas, that's pretty much their choice. How clean is clean enough? As clean as people are willing to vote for directly, or to elect politicians who promise ever-greater environmental cleanliness.

For our part, we should be working to make sure that:

- There is no fraud involved—that the public is actually getting what the government says it's providing with one rule or another;
- There is no theft involved—that the group demanding any nonhealth-based environmental amenity is paying for it;
- That punishment for harming someone else's health (in situations that can't be handled well by tort law) emulates the ideal outcome of a tort-law system; that is, the polluter remediates or pays in a way that a jury would find reasonable;
- That government spending of tax dollars avoids waste, and hence, prioritizes spending toward larger, more-certain problems with cost-effective remedies, rather than low-certainty "problems" with expensive and draconian "solutions."

Jerry Taylor: And we should keep our goals in mind. Is our prime goal the establishment of free markets where people can "maximize their utility"—that is, secure their preferences regardless of whether I like them or not? Or is it a society that chooses tangible wealth creation over preservation of ecosystems? I suggest that a libertarian should be more inclined toward the former than the latter.

Fred Smith: Now wait a minute. People are not inherently anti-development nor anti-drilling. Yet the Sierra Club and its allies have demonized energy development in supposed "wilderness" areas. We have not been able to advance a neutral process (for example, by privatizing ANWR), nor have we conveyed the fact that the environmental movement is denying the American taxpayer economic gains that organizations such as the National Audubon Society have accepted on their own lands (as in the Rainey Wildlife Refuge).

With respect to ANWR there are several messages. The dominant one is that energy development should be viewed as a legitimate option. A more basic message would be that a range of choices (not "preservation trumps all") better reflects the varied values of the American public. ANWR belongs to all of us, not just wealthy elites who can afford the high costs of a trek to the Arctic tundra. The environmental activists pushed the egalitarian strategy by claiming that the traditional lifestyle of the Gwich'in would be destroyed, even though the outcome may well perpetuate poverty. I'm not sure about the exact content or phrasing of the relevant value messages. But I'm sure that our side failed at the communication challenge, and their side succeeded.

Participants were: Fred L. Smith, Jr., President, Competitive Enterprise Institute, Washington, D.C.; Jerry Taylor, Director of Natural Resource Studies, Cato Institute, Washington, D.C.; Richard Belzer, President, Regulatory Checkbook, Washington, D.C.; Victor Porlier, President, Center for Civic Renewal, Inc., Delmar, New York; Kenneth Green, Chief Scientist, Reason Foundation, Harker Heights, Texas

HOW THE MILESNICKS FOUND MARKETS

Fly-Fishing on a Cattle Ranch

By Kris Kumlien

A short fifteen minutes outside the small Montana town of Belgrade, the Thompson and Benhart spring creeks emerge from an underground source, cutting jagged blue streaks through the green and yellow fields of Tom and Mary Kay Milesnick's cattle ranch. How the Milesnicks dealt with those creeks is a story of how markets and entrepreneurship can reduce hassles, spur cooperation, and provide the funds to restore natural beauty.

Spring creeks are known as excellent trout streams. Continually refreshed from under ground, their water never freezes and they can nurture large trout. But twenty years ago, the Thompson and Benhart creeks weren't known for spectacular fishing—few people were aware of them at all. The Milesnicks, busy with raising cattle, allowed fishers to come on the stream at will. "Access was given to everybody," says Mary Kay Milesnick. "They had to stop and ask, but we let everyone on."

As more fishers discovered the creeks, monitoring access became burdensome. "Things became noticeable in 1990," recalls Tom Milesnick. "By '95 there was a really big influx. That was when fly-fishing became the 'in' thing to do." (*A River Runs through It*, the Robert Redford-directed movie that celebrated fly-fishing, was released in 1992.) The Milesnicks had attempted to restore some control over their property with a sign-in program in 1991. "That was when we went to written permission, with the drop box and sheets by the garage," says Mary Kay Milesnick.

As the numbers of fishers rose, so did the abuse of the resource. According to Tom, some guests were fishing the creeks "as many as five or six times a week." Others guided fly-fishing

Barry & Cathy Beck

Twenty years ago, the Thompson and Benhart creeks weren't known for spectacular fishing—few people were aware of them at all. As more fishers discovered the creeks, monitoring access became burdensome.

Courtesy of Tom and Mary Kay Milesnick

trips without notifying or compensating the Milesnicks in any way. The increasing activity created a managerial headache and took time away from the cattle business. Milesnick family members were spending up to three hours a day talking to fishers.

Around the same time, Tom Milesnick recognized that the creeks had slowly been deteriorating from years of overgrazing on adjacent ranches. The streambeds were laden with silt, which choked off most of the aquatic vegetation that fosters a healthy insect population, necessary for a good trout stream. Tom described the scene as "bleak." He recalls: "The banks were beaten down and both streams were real wide and shallow, and Thompson was filled with silt. I knew they needed help."

Because reclamation was costly, Tom purchased a backhoe and did it himself. Beginning in 1993, Tom spent six years slowly rejuvenating the two streams. Digging holes, laying rocks, removing sediment, planting streamside and aquatic vegetation, and channeling water into areas so fish could spawn, Tom singlehandedly brought the creeks back to life. In addition, he lined several sections of the stream entirely with rocks and gravel to provide his cattle with a path across the stream. "The cows come from literally miles to cross at these places," says Tom. "They really seem to like them." Contributing to the overall health of the streams was a grazing practice that had been in place since 1992. Cattle have to be away from the stream banks for extended periods of time, allowing vegetation to take hold.

As the winter of 1998 set in, Tom and Mary Kay set out in search of a way to limit the general public's use of their land without cutting it off completely. "Nonuse is as bad as overuse," says Tom.

Because the creeks fall almost entirely within the bounds of their ranch, restricting public access was only a matter of posting their property. But how should they allocate access? The two spoke first with state officials about by-permit-only fishing. "They wanted to have people go to a regional office in Bozeman to get per-

Mark Macleod

In 1998, Tom and Mary Kay Milesnick set out in search of a way to limit the general public's use of their land without completely cutting off access.

mits, and hours from 8 a.m to 5 p.m. during the week don't work for the fishing public," says Tom. "Plus I lose my direct control over my land, and then I can't ranch when I need to."

Then they looked to the private sector. The reclamation work had cost around $70,000. Perhaps a pay fishery could help recoup these costs. They learned more about pay fisheries at several private spring creeks in nearby Paradise Valley, and Dave Kumlien, a friend and local small business owner, advised them on establishing one. "The Milesnicks were interested in income, but were very concerned about protecting the fishery and the experience," says Kumlien. The two agreed to limit the number of fishers to six a day, and to charge a rod fee of $50 per fisher (now $75 during the busiest season). With the system in place, Tom could ensure that the creeks would not be overfished and that there would be money for future restorations and upkeep.

He started the pay fishery in 1999. "Now there is an understanding and respect for my land that wasn't there before," Tom said. "I don't know why—I guess it is just human nature."

The numbers alone tell a compelling story. The spring creeks host 500 to 600 fishers a year, compared to more than 1,550 in 1998. What was once perhaps a mere one-mile stretch of fishable water on the creeks has become between four and five miles of prime trout habitat. What was once a strain on the Milesnicks' time and assets has blossomed into a business that grosses around $30,000 a year, nearly 40 percent of the ranch's net profits.

The creeks themselves have undergone a miraculous transformation. Stretches of water once void of all but silt and rock are rich with trout, insects, and vegetation. The previously barren banks now flourish with clusters of cattails and rows of long grass and overhanging bushes. Through the enforcement of property rights and the access to a growing private market, a classic tragedy of the commons has been overcome.

Kris Kumlien, a student at Montana State University, was a research intern at PERC during 2001. He spent the past semester in Washington, D.C., working as an aide to Senator Conrad Burns of Montana.

THE FIRES THIS TIME

The fires are tragic but they are just a symptom. The Forest Service must regain its ability to manage its land. The Forest Service is an agency without a mission. It moves with the current fashion, and today the politcally correct fashion is the "preservation of diversity," to use a phrase of former Forest Service chief Jack Ward Thomas.

INDECISION AT THE FOREST SERVICE

By Roger Sedjo

Doug Loneman

Summer is approaching, and wildfires are already raging through parts of New Mexico, Colorado, and Georgia. Yes, there is drought again this year, but it is increasingly clear that the U.S. Forest Service is in a poor position to act decisively. It can throw more money at fire suppression, but this only postpones the inevitable fire crises. The fires will return. They are tragic, but they are just a symptom. The federal agency must regain its ability to manage its land.

The Forest Service is an agency without a mission. Thus, it moves with the current fashion, and currently the politically correct fashion is the "preservation of biodiversity," to use a phrase of former Forest Service chief Jack Ward Thomas.

The Forest Service was created because of a misunderstanding at the end of the 19th century. Logging companies were cutting a wide swathe across the upper Midwest, and many people anticipated a "timber famine." Theodore Roosevelt, among others, expected that an uncontrolled private market would wipe out the nation's timber. The federal government created "forest preserves" to provide a continuous supply of timber. Yet the timber famine never arrived.

The private sector turned out to be decent managers. Today, the United States is the world's largest producer of commercial wood, accounting for over one-quarter of the world's total output. Less than five percent of this timber comes from federally owned forests.

So the original purpose of the Forest Service has disappeared. Timber harvests from national forests have fallen by about 85

percent since the 1980s, from over 12 billion board feet to less than 2 billion. To many this is a waste as well as a hardship on communities dependent on timber production. Perhaps most important, it contradicts good management. Mature, crowded, and insect-infested trees burn, and they burn hot and fast.

How did this happen? In its early years, the Forest Service at least had a clear mandate: to produce timber, protect water, and make sure that the forests were maintained. Ironically, one of its great successes was in curtailing destructive forest fires, which peaked around 1930. In 1952, a *Newsweek* story praised the agency in glowing terms, featuring Smokey the Bear on the cover. The agency managed to satisfy the interest groups that paid attention to it—the timber industry, the nascent environmental movement, hunters, and people living near the forests. Most decisions were made locally.

During the 1970s and 1980s, however, large environmental groups gained power. They pushed for more preservation and more old-growth forest. They succeeded in "nationalizing" public forest issues. Voters in New England proved to be passionate, and influential, about the environment in Montana.

Doug Loneman

The battle over the northern spotted owl, a small bird listed under the Endangered Species Act and residing in the old-growth forest of the Pacific Northwest, epitomized the conflict. When the dust cleared, an estimated 17 million acres of forest, a large portion of it old-growth, had been removed from the national forests' timber base. The national environmental groups had won.

This was a pyrrhic victory, however. Such decisions—including the subsequent set-aside of 60 million acres by the Clinton administration—have created a tinderbox throughout the national forests. Although environmentalists point out the benefits of small fires in reducing fuel loads, 70 years of fire suppression have created conditions ripe for large catastrophic fires. In these cases, creating healthy, resilient forests is more safely done by careful timber management than by uncontrolled fire.

Today, the Forest Service faces several choices. One is to return to the multiple-use objectives of the past—getting back into the timber business while supporting recreation and some preservation. This seems unlikely.

Environmental groups push for a different alternative, custodial management—a "hands off" approach. Yet this policy threatens even more fire.

Active ecosystem maintenance and restoration is another option, but there is no consensus on what ecosystems the forests should be restored to. Pre-Columbian forests? This would be very costly, probably impossible, and there is no compelling logic for electing any particular period in history.

Another choice is to begin to return management to local control. The Forest Service would allow the people in each forest region to influence forest planning to respond to local conditions. The Quincy Library Group, a coalition in northern California, has tried this approach, attempting to inject more local input into management plans. They haven't gotten very far. All such approaches face a hard time because of bitter opposition by self-interested national environmental groups. But unless the Forest Service moves forward in some direction, it, too, like its timber base, might well go up in flames.

Roger Sedjo is a Senior Fellow at Resources for the Future, a Washington, D.C., research organization that studies natural resources. In 2000, he served as a Julian Simon Fellow with PERC.

GREENER PASTURES

By Linda Platts

Golfing Gone Wild

Golf courses, once considered wicked over-watered stews of pesticides, fertilizers, and alien plant life, have gained new luster with the environmental community. As homes and businesses continue to spread across the landscape, golf courses are often providing the open spaces that communities crave. Increasingly, these open spaces are offering up wildflowers, native plants, bluebirds, turtles, wild turkeys, and red foxes along with the customary water hazards.

Many of the changes occurring on the golf course stem from a summit meeting of sorts that took place at Pebble Beach, Calif., in the mid-1990s between golf organizations and environmental groups. A set of environmental principles was agreed to and over time real changes have begun to take hold.

Golf course superintendents, many equipped with master's degrees in agronomy, have found innovative ways to steward the land and cut costs. At one club, the superintendent discovered that pest resistance soared when the grass was allowed to grow just one-eighth of an inch higher, allowing him to sharply reduce the use of pesticides. Another unusual approach to pest control came in the form of dozens of bat and bluebird houses placed around the course. And the same superintendent kept his ponds clear of algae by introducing carp rather than algicides.

Water use, a major expense for golf courses and a major sore point for environmentalists and sometimes communities, has been tackled on a number of fronts. Highly efficient irrigation systems have worked at some courses, while the installation of drought-tolerant native plants has cut water use elsewhere. At one club, the superintendent replaced the Kentucky blue grass on the fairways with creeping bent grass and cut his water bill in half.

Winning over golf course management, however, is only half the battle. Players also have had to change their expectations from the glowing green of a manicured monoculture to one that allows for a path lined by black-eyed Susans, a patch of tall grass where a family of foxes can hide, and the occasional brown spot or two.

As open space near urban centers becomes scarcer, golf courses are providing surprisingly good habitat for wildlife and reconnecting a lot of people with a bit of the natural world.

—The New York Times

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"Greener Pastures" showcases market approaches to environmental protection and natural resource use that benefit private entities as well as the public. Thanks to Sam Westlind for the second item.

Salted Irrigation

Salt deposits can destroy farm land, but at long last, one scientist has found a crop that will tolerate irrigation by sea water. Carl Hodges' company, Seaphire International, has joined with the government of Eritrea in a venture known as Seawater Farms on the edge of the Red Sea. Eventually, this farm is expected to cover 10,000 desert acres.

Water from the Red Sea flows in a three-mile-long manmade channel through the farm. First, it provides fresh-flowing water for shrimp tanks, then takes the effluent to tanks teeming with tilapia, a light-fleshed edible fish (whose skin can be made into leather goods). The effluent, twice enriched with the nutrients from the animal waste, then flows on, irrigating and fertilizing crops of salicornia, a speared, woody stemmed halophyte.

After researching more than 1,000 salt-tolerant plants, Hodges chose the salicornia, or sea asparagus, because of its market potential and its minimal environmental impact. The tips are a savory delight, but much of the crop's value comes from its seeds, which can be ground into a high-protein meal or pressed into a quality cooking oil. After flowing through the fields, the river of water reaches manmade wetlands where thousands of indigenous mangroves and other native flora support wildlife including herons and flamingos. The water completes its journey by seeping into the soil and back to the sea.

Salt accumulation has ruined many agricultural areas, but here the groundwater is already salty, and the constant flow keeps the salt levels on par with local conditions. The accumulated nutrients from the animal wastes build up soil fertility, so that fewer artificial fertilizers are needed.

The farm's goal—to feed an expanding population while minimizing impacts on the planet—has been met. The project has also produced significant revenue. Seawater Farms generated $10 million worth of shrimp, fish, and salicornia in 2001. When the farm is fully operational by 2005, it could generate 10 times that amount.

—U.S. Water News

Banking on Organics

When executive David C. Cole left high-flying AOL, he was a millionaire many times over. He bought a family farm in Virginia and settled in, but with no intention of retiring as a country gentleman. Instead, he saw an opportunity to propel the organic foods market into the mainstream, and eventually add to his fortune.

Cole had a longstanding interest in specialty foods, first as a vegetarian and later as a meat-eater when he was enticed by the Japanese delicacy Kobe beef. At his 425-acre farm, Cole established a 700-head herd of Kobe cattle and invested millions of dollars in other projects. He rehabilitated the depleted soil, developed an irrigation system of ponds and water channels, removed dead and diseased trees, and planted thousands of new trees and hundreds of varieties of fruits and vegetables.

Life on the farm is purring along as smooth as can be. While a llama guards the sheep, the goats clear the fields, and the free-range chickens eat the insects and fertilize the soil with their droppings. The pigs aerate the cattle bedding, the cattle eat the dropped and rotted apples in the orchards, and the dogs keep the bears from feasting on the peaches and cherries. The farm sells 50 varieties of tomatoes, 25 of sweet peppers, 20 of lettuce, 17 of potatoes, many kinds of fruit as well as eggs, pork and beef.

Cole's sales were up 300 percent last year, and he expects them to double this year as sales of organic foods nationwide are increasing 20 percent annually. With the purchase of a Pennsylvania food purveyor, he has set his sights on packaging organic products for supermarket distribution to meet the growing demand.

Cole is also encouraging nearby farmers who are struggling to stay in business to take advantage of the healthy profit margins offered by organic products. His farm is becoming an information center for organic farming, and he has paid his employees and outside consultants to work with traditional farmers interested in making a transition.

—Gourmet

TRADING IN TRASH

By Daniel K. Benjamin

economist, *n. a scoundrel whose faulty vision sees things as they really are, not as they ought to be.*

—after Ambrose Bierce

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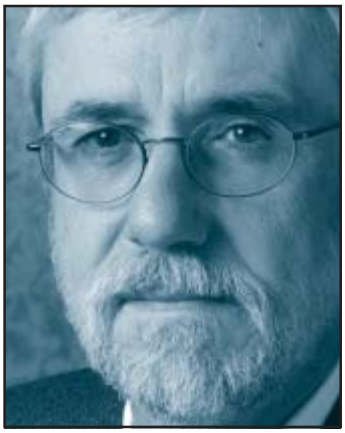

Interstate trade in trash, which has tripled over the past decade, has been the subject of repeated assaults by states seeking to halt garbage imports. All of these have failed at the hands of the Supreme Court, which has ruled state interference with trade in trash to be as unconstitutional as other state attempts to restrict interstate trade. Yet the Court has acknowledged that Congress' power to regulate interstate commerce extends to rubbish. Thus, since 1995 various congressional proposals to restrict the trash trade have been floated.

Because forty-seven states now ship some of their garbage to other states and forty-five of them import the stuff, the issue is nationwide. Recent research reveals what such restrictions would cost us (Ley, Macauley, and Salant 2002). The bottom line obviously depends on the extent of the trade restrictions, but Ley et al. demonstrate that complete prohibition would lower our collective wealth by nearly $4 billion. In some areas of the country, where trash is a particularly important import or export, the per capita losses could exceed $350.

Interstate movement of municipal solid waste (MSW) amounts to nearly 10 percent of the MSW produced every year in the United States. The extent of this trade is driven by a combination of widely varying disposal costs and inexpensive transportation. Due to differences in land values and local regulations, average tipping (disposal) fees at landfills range from around $10 per ton in Nevada to $80 per ton in New Jersey. Moreover, it costs only 10-15 cents per ton-mile to move solid waste around the country. Thus, for example, trucking twenty tons of trash from Trenton to Pittsburgh would save the shipper $1,000 in tipping fees at a cost of $400 in trucking charges, yielding a profit of $600.

Given numbers such as these, it is little surprise that eight states, headed by New York and New Jersey, export more than one million tons of trash each year, or that eight other states, led by Pennsylvania, each import comparable amounts. Even Montana gets in the game,

A complete ban on all interstate trade in trash would force households and firms in exporting states to seek higher-cost disposal sites, and would impose losses on landfill operators in importing states, who would see significant declines in their business. Overall, the economic losses would total some $3.8 billion.

importing trash from South Dakota, Wyoming, and Idaho, and returning the favor to South Dakota.

The most cogent objection to the interstate trade in trash is that landfills allegedly harm citizens living near landfills, costs that are not taken into account by those who dump. (The same claim could, of course, be made about trash produced by one's neighbors.) Yet even the Environmental Protection Agency acknowledges that the potential threat to air and water quality posed by modern landfills is essentially nonexistent.

Still, disrupting trade in trash would benefit households in importing states by depressing tipping fees there, as out-of-state dumpers exited the local market. It would also satisfy the inclinations of those who believe—rightly or wrongly—that imported trash is a threat to their health and well-being. Thus, the possibility of restricting interstate trade in trash remains on the congressional agenda.

The possibilities under consideration run the gamut. At the low end, Congress would simply empower states to levy a tax of up to $1 a ton on imported trash. Such a minuscule fee would have little impact on the magnitude of the trash trade, thus resulting in only about $10 million in economic losses.

At the other extreme, some proposals have called for a complete ban on interstate trade in trash. This would force households and firms in exporting states to seek higher-cost sites at which to dispose of their trash. It would also impose losses on landfill operators in importing states, whose business would decline. Of course landfill operators in states that currently export rubbish would benefit from a rise in local business, but these gains would be swamped by consumers' losses. Overall, the economic losses of banning interstate trade in trash would total some $3.8 billion, with a singularly uneven burden. Illinois residents, predominantly Chicagoans, would lose an average of but 17 cents apiece (because the landfills in rural Illinois are good substitutes for those in southern Wisconsin). In contrast, western Pennsylvanians would average some $370 per person in damages (because landfill operators would lose trash from New Jersey). Between these extremes, New York City residents would suffer losses of $93 apiece due to higher disposal fees.

Clearly, the size of these losses is modest in the context of the enormous American economy. Yet the estimates highlight a recurring feature of much extant and proposed federal environmental legislation. Restricting free interstate trade in trash will result in clear and demonstrable costs, leading to unequivocal reductions in our welfare. These will come in supposed anticipation of environmental benefits that—to date—can at best be said to be speculative.

REFERENCE

Ley, Eduardo, Molly K. Macauley, and Stephen W. Salant. 2002. Spatially and Intertemporally Efficient Waste Management: The Costs of Interstate Trade Restrictions. *Journal of Environmental Economics and Management* 43: 188–218.

PERC REPORTS

As the snow melts in Montana and the sun rises higher above the horizon, PERC begins its most active season, with many visitors from around the country and the world. For those we can't greet in person, we send this issue of PERC Reports.

Doug Loneman

PERC Reports *showcases ways to address environmental problems through voluntary choices and local interaction. As our readers know, we are often skeptical of government solutions, especially "top-down" government solutions. At the same time,* PERC Reports *is a forum for discussion. We welcome challenges, disagreements, and new ideas.*

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