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Pressure builds on EPA to enforce clean air laws

Code Red, we know, would put the nation on imminent terror alert. But for 76-year-old Betty Jane Mutzig and many others, it has another terrifying meaning. The warning is issued when the air is “unhealthy” to breathe. Charlotte, NC, where Mutzig lives, endured ten Code Red days in 2002.

Half of all Americans live in areas that fail to meet health-based Clean Air Act standards. Ozone and fine particle pollution from power plants is most dangerous to the elderly, children and people with asthma, constricting airways and leaving its victims gasping for breath.

Some of Charlotte’s pollution, like that of many cities, drifts in from other states. Prevailing winds can make emissions from a single power plant anyone’s business, including residents of rural communities.

In a step toward cleaner air, the U.S. Environmental Protection Agency unveiled a plan in December that would reduce smog- and soot-generating emissions from power plants across the East. The move follows two years of advocacy by Environmental Defense, in which we encouraged EPA to take immediate



Mark Richards/PhotoEdit

Stricter pollution controls can deliver \$80 billion in health and environmental benefits while costing utilities \$5 billion.

administrative action under the Clean Air Act. The proposed “interstate air quality rule” would force states to lower power plant emissions 70% by 2015, removing an estimated nine million tons of sulfur dioxide and nitrogen oxides from the air annually.

“This proposal is a big step toward protecting public health from harmful air pollution,” says our attorney Vickie Patton, “but the reductions should be deeper and the program expanded to clean up western power plants.”

Under EPA’s proposed rule, eastern states can choose to cut emissions at existing power plants by participating in a cap-

and-trade program. The plan is similar to the highly successful market-based program to control acid rain pioneered by Environmental Defense in the 1990s.

If finalized, EPA says the new limits would prevent 13,000 pre-



Ken Kaminesky/Corbis

A family affair: Asthma in children has jumped 160% in two decades, a nationwide epidemic. Asthma attacks can be triggered by air pollution.

*Please see
Cover Story, p. 2*

Wanted: A Teddy Roosevelt of the seas



As a child, I fished the East Coast waters with my father. I now fish those same waters with my sons. But much has changed.

Today we catch far fewer and smaller fish.

Our oceans have taken a beating. Coastal areas are degraded, and an estimated 70% of commercial fish species have fallen below sustainable levels. Two prestigious commissions point to the need for coherent management to protect our coastlines, preserve coral reefs and rescue vanishing fisheries.

The crash of the oceans is happening largely beneath the public's radar. Lack of public awareness sur-

renders the debate on ocean management mostly to the fishing industry, developers and oil companies. Policies have tended to favor exploitation of marine resources.

In seeking to reform the laws, we must engage the public. Environmental Defense will undertake a major educa-

We need a national dialogue on the oceans.

tion campaign this year, enlisting new allies and relying on science to persuade opponents. The U.S. Commission on Ocean Policy, appointed by President Bush, will submit its report this summer, and the president is obligated to respond. With all eyes on the presidential race, Environmental

Defense will urge the president and his Democratic challengers to issue explicit, meaningful commitments on the oceans.

Just as Teddy Roosevelt created magnificent national parks in the last century, we need a president today willing to protect crucial marine habitats. Whoever is elected president in November must beef up enforcement, streamline conflicting laws and guarantee safe and abundant seafood by making sustainable fishing an economically attractive way to fish. Fortunately, the oceans are resilient. If we act now, my sons and other young people nationwide will know the joy of a day's fishing with their kids.

COVER STORY: Court upholds EPA's power to ensure clean air

Continued from page 1

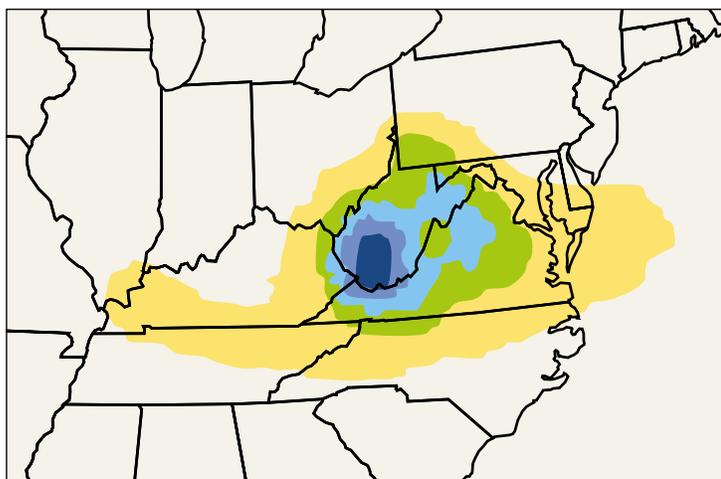
mature deaths, 240,000 asthma attacks and tens of thousands of hospitalizations annually.

Meanwhile, our continuing efforts to ensure that new power plants and industrial sources install the best air pollution control equipment got a boost from the U.S. Supreme Court. In January, the high court upheld EPA's power to enforce clean air measures when states

fail to do so. Environmental Defense spearheaded a coalition of environmental groups in the case, which involved enforcement against the world's largest zinc mine, the Red Dog Mine in Alaska.

"The Court's favorable decision highlights the Bush administration's ambivalence about exercising its enforcement powers," says Patton. Last year, EPA announced it would drop enforce-

ment investigations against some 50 power plants nationwide for failing to meet rigorous pollution control standards. The agency's decision was part of a broader plan to relax clean air protections known as New Source Review. The changes would allow thousands of aging



Ill winds: Even on stagnant summer days, air pollution from power plants in West Virginia can travel as far as North Carolina.

Environmental Defense
Adding the ways that work

Solutions

Editor: Peter Klebnikov

Environmental Defense, 257 Park Avenue South, New York, NY 10010. Main number 212-505-2100.

Membership questions: Call 800-684-3322 or email members@environmentaldefense.org

Mailbag: Mail to address above, call 800-242-3251 or email editor@environmentaldefense.org

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New York • Washington • Oakland
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Project office: Los Angeles

Online at www.environmentaldefense.org

SAMI



MAILBAG

Dear Environmental Defense:

The Nov.-Dec. *Solutions* refers to Mexico's Laguna Madre as a "fragile ecosystem." I see that phrase quite often, and in my view it is terribly misleading. In fact, ecosystems are usually very resilient. Witness the rapid recovery of many ecosystems from natural disasters such as fires.

Ecosystems are in trouble not because they are fragile but because humans are assaulting them with so many damaging impacts. However, there is hope. If we limit our impacts, many ecosystems are resilient enough to recover.

Lawrence B. Cahoon, Professor of Biological Sciences, Univ. of NC



Greg Lasley/Vireo

Endangered Attwater's prairie-chicken

Dear Environmental Defense:

I am aware of the need to conserve native plants and animals on private land, and welcome incentives such as your Safe Harbor initiative. However, I have concerns that this may dilute allegiance in Congress to the Endangered Species Act.

Sidney Blankenship, Adrian, TX

Endangered species expert Margaret McMillan responds:

Environmental Defense supports a strong Endangered Species Act. Innovative tools such as Safe Harbor supplement—but do not replace—the law's requirements by encouraging landowners voluntarily to restore habitat or re-introduce endangered species. The resulting successes can build support for the Act.

PLEASE WRITE US!

See addresses at left

Washington watch



Toxic mercury is not suited to emissions trading

In government circles, the power of the marketplace is being served up as the universal answer for air pollution. The Bush administration touts its proposal to cut mercury pollution through emissions trading as "bold" and "aggressive." It is neither.

Pioneered by Environmental Defense over a decade ago, the emissions trading program to reduce acid rain has proven to be America's most successful clean air law. It set strict limits on pollution but let plant owners decide how to make the cuts, allowing them to trade obligations among themselves. This "cap-and-trade" approach used the marketplace to cut acid rain faster than expected at a fraction of the predicted cost.

Based on this success, China has tapped Environmental Defense to help establish a similar program there. Trading also forms the basis of the Kyoto Protocol, and the European Union has chosen it to reduce global warming pollution.

But just because a program uses

emissions trading doesn't mean it's good for the environment. A trading plan we helped defeat in New Jersey, for example, required no cuts in emissions. Without accountability and strict limits on pollution, emissions trading programs amount to little more than empty promises.

Consider the Bush administration proposal to reduce mercury pollution. It sets limits that do too little, too late to protect public health adequately. Mercury, which is a poison, has been found to concentrate in "hot spots" (*see story, p. 8*). Trading, which would allow some plants to emit more mercury than others, could allow these toxic "hot spots" to continue.

Our Washington office is pressing EPA to tighten controls on mercury and is asking Congress to require sharper reductions in other power-plant pollutants, using trading. "Don't believe the hype," says our program manager Joseph Goffman. "The administration's plan on mercury will not bring healthy air to Americans anytime soon."



Dennis Mac Donald/PhotoEdit

Clearer skies can grace America thanks to emissions trading, but power plants must be kept under strict limits.

A better future for America's fisheries

IN NEW ENGLAND, FISHERMEN SEEK TO END A 'TRAGEDY OF THE COMMONS'

On George's Bank off the coast of Massachusetts, cold, nutrient-rich currents from Labrador collide with the warmer Gulf Stream to create one of the world's most productive fishing grounds. Codfish from this area were once so important to the economy that in 1784 a wooden carving—the "Sacred Cod"—was hung in the Massachusetts State House.

Once considered inexhaustible, groundfish stocks on George's Bank have crashed. The combination of overcapitalization of the fishing fleet and well-intended but poorly designed management plans proved devastating, not just for the fish but for fishing communities, too.

By 1995, the amount of cod on George's Bank plummeted to one-fifth of what it was in 1980. This was what resource management experts know as the "tragedy of the commons," a refer-

ence to overgrazing in 18th century England. Without incentives to conserve, fishermen are compelled to compete to catch the last fish, before someone else does.

To prevent that from happening, parts of George's Bank have been closed to commercial fishing. "We've got quite a bit of rebuilding to do," says John Pappalardo, a Chatham, MA hook-and-line fisherman and member of the New England Fishery Management Council.

Environmental Defense has forged alliances with fishermen and other stakeholders to promote innovative tools like Individual Fishing Quotas (*see box, p. 5*) to

rebuild marine resources. According to a forthcoming report from the U.S. Commission on Ocean Policy, many of the nation's fisheries face a predicament similar to cod's. President Bush is required to respond to the report under the law that created the commission.

In New England, federal regulators have tried to control the amount of fishing by restricting the number of days at sea, rather than the amount of fish

caught. This flawed system has allowed the harvest of two to three times more fish than is sustainable.

To avoid the fate of the Grand Banks cod fishery off Newfoundland (which has been shut down completely, putting 40,000 people out of work), the New England Council has taken a step that would have been unheard of two years ago.

AN ECOSYSTEM APPROACH

In May, the National Marine Fisheries Service will begin implementing a pilot program developed by the Council to allocate a portion of the "total allowable catch" for cod to the hook-and-line fleet, as long as an attempt to block this promising program is halted.

"This marks the first time that New England fishermen will be held truly accountable for the number of groundfish they catch," says Environmental Defense marine conservation advocate Sally McGee, who sits on the Council and supported the plan.

Like most New England fishermen, Pappalardo used to oppose quota programs. "But after considering how quotas have helped Alaska halibut," he says, "I now believe they may be our best hope for survival. By demonstrating that we can operate efficiently—and actually prosper—we hope to get other sectors of the fishery on board."



Susan Van Eitton/PhotoEdit

If plans to revive one of the nation's most troubled fisheries are successful, boats will ply New England waters for generations to come.

Master and commander

Fishermen are well aware of Sally McGee's reputation as a consensus builder. But many are surprised when they learn that our marine conservation advocate also has a U.S. Coast Guard merchant mariner's license, which certifies her to operate a 100-ton vessel. To earn the license, McGee had to log 540 days at sea. That's only one of the qualifications that won her an appointment as the only representative from an environmental group to sit on any of the nation's ten fishery management councils. McGee knows her way around Congress too. Until recently, she was the lead staffer on marine issues for Representative Wayne Gilchrest (R-MD), chairman of the House fisheries committee.



“Managing the ocean species by species clearly hasn’t worked,” says our scientist Dr. Rod Fujita, author of the recently released book *Heal the Ocean* (see envelope facing p. 7). “We need to take a broad ecosystem approach that recognizes the complexity of the marine environment.” To that end, Environmental Defense is developing new methods along the entire

U.S. seaboard for identifying and protecting imperiled marine habitat:

- **In the Gulf of Mexico**, an Individual Fishing Quota program for the commercial red snapper fishery is under way, and we are now working with U.S. and Mexican fishermen to extend new ideas to recreational fishing and the shrimp fishery.

- **On the West Coast**, at our urging, the regional council has voted to move forward with an IFQ program for Pacific groundfish. This tool could complement the marine reserve network that we helped establish in California’s Channel Islands.

- **In the Southeast**, we’re working on a comprehensive

plan to reduce coastal pollution and create an interstate network of marine protected areas.

Together, these efforts will help restore the bounty of the ocean, not just for commercial gain, but for biological and recreational reasons as well. With good management, George’s Bank could once again become New England’s breadbasket.

To rebuild the oceans

HOW INDIVIDUAL FISHING QUOTAS WORK

Whether in the Atlantic, the Pacific or the Gulf of Mexico, fisheries share the same problem: too many boats chasing too few fish. Environmental Defense has long advocated the use of Individual Fishing Quotas, or IFQs, to rebuild fisheries. Programs vary, but generally each fisherman is assigned a share of the allowable

catch set by scientists. If a fisherman wants to expand or get out of the business, he can buy or sell shares. This system already is working in more than 100 fisheries worldwide. With quotas, fishermen and coastal communities become investors in the long-term health of marine ecosystems.

Less waste. Short seasons often lead to too much fish caught at one time. With quotas, fishermen decide when market conditions are most suitable



Creating a sustainable fishery. Quotas provide incentives not to overfish. As fish populations recover, the allowable catch increases, giving fishermen a direct economic stake in the long-term health of the fishery.



Fresh fish year-round. Fishing is profitable all year with a well-designed IFQ program. Consumers benefit from a steady supply of fresh fish.



Healthier coastal communities. Fishing communities are hard hit by boom-and-bust cycles that plague fisheries. IFQs can put fishing communities on firmer economic footing.



Main photo: ???; foreground photos, clockwise from upper left: John Hyde/Bruce Coleman, Colla/Bruce Coleman, Jeff Greenberg/PhotoEdit, P. Frischmuth/Peter Arnold

Regional update

Connecticut feels the heat of global warming

In 1999, lobsters in Long Island Sound began dying in record numbers. By 2003, they had plummeted 70%. Jim King, a lobsterman for 40 years, survived the decline, but many of his colleagues went bankrupt. While not all the causes of the die-off are understood, scientists believe that warmer water temperatures due to global warming played a role.

Connecticut lost millions of dollars when the industry crashed—and the disaster may foreshadow the future. We recently released a study showing that Connecticut is warming faster than the rest of New England. Rising temperatures could worsen pollution and bring new illnesses, storms and floods. The study is available at www.environmentaldefense.org/go/CTclimate.

Fortunately, Connecticut can take steps to turn down the heat. We have partnered with the Connecticut Fund

Vehicles are the state's largest source of greenhouse gases.

for the Environment and the state Public Interest Research Group on a bill that will dramatically reduce pollution from vehicles, the single largest source of greenhouse gas emissions. The measure was introduced with bipartisan support in February. Maine, Massachusetts, New Jersey, New York and Vermont have passed similar measures.

“Connecticut can't solve global warming on its own,” says our president Fred Krupp, a Connecticut resident. “But it can help lead the way among states and build momentum for national action.”



In 100 years, Connecticut could feel more like North Carolina than New England.



Taber Photo/Courtesy Sierra Club

The way it was: Support is building to drain the reservoir that in 1913 drowned Yosemite's majestic twin valley.

Initiative could reclaim the beautiful Hetch Hetchy Valley

In a typical year the number of tourists visiting Yosemite National Park equals the population of Chicago. Millions marvel at the park's flower-strewn valleys and towering cliffs, a testament to the nation's ability to preserve wilderness.

Most Americans don't realize the park contains two remarkable valleys, Yosemite and Hetch Hetchy Valley. Unfortunately, visitors can no longer see Hetch Hetchy, since Congress in 1913 authorized a reservoir there to provide water for San Francisco.

The flooding of Hetch Hetchy remains one of America's worst environmental mistakes. But today, improved means of conservation and new storage options have made restoration of Hetch Hetchy Valley a real possibility. Support for such a move is growing.

A window of opportunity will open as San Francisco prepares to spend \$3.6 billion to revamp its water system.

Environmental Defense believes the city's water needs can be met while allowing Hetch Hetchy to be returned to the American people. Using information provided by the city, we have commissioned a feasibility study.

If our study shows the valley can be restored cost-effectively, our goal is to begin draining the reservoir

Undoing a tragic environmental mistake

by 2013, the 100th anniversary of Congress's ill-advised decision.

“Alternative sources of water and power are available, but natural treasures like the Hetch Hetchy Valley are irreplaceable,” says our analyst Spreck Rosekrans, whose findings already are generating supportive editorials in newspapers across America.

States take the high road on clean cars

ENVIRONMENTAL DEFENSE HELPS CUT EMISSIONS, OVERCOMING FEDERAL INACTION

When the New Jersey legislature was debating clean car legislation, an auto industry lobbyist dismissed the bill under consideration as “goofy.” But there’s nothing goofy about clean air, as the state’s elected officials overwhelmingly made clear in January.

After a lengthy battle, the legislature passed a law requiring the state environmental agency to adopt California’s Low Emission Vehicle Program, which strictly limits tailpipe emissions for new cars. “This is a huge victory for clean air in New Jersey,” says our project manager Millie Baird. “This bill will put the Garden State on the road to cleaner air.”

The legislation culminates an intense campaign by New Jersey PIRG, Environmental Defense and others. Vehicles contribute 40% of in-state air pollution and more than 80% of the air-borne carcinogens. By 2020, the new rule will have an effect equivalent to taking

more than 300,000 new cars off the road.

Starting in model year 2009, carmakers will be required to offer 40,000 hybrid vehicles and 128,000 ultra-low-emissions vehicles for sale in the state. The law also opens the door for New Jersey to adopt California’s law limiting global warming emissions from vehicles.

Under the federal Clean Air Act, states may adopt California’s stricter emissions standards as an alternative to lax federal rules. So far, Maine, Massachusetts, New York, Vermont and now New Jersey have adopted the tougher rules. Maryland, North Carolina, Pennsylvania and Rhode Island may follow suit.

Environmental Defense is working



More hybrids will be hitting the streets, including the first luxury model, this soon-to-be-released Lexus.

with groups in Connecticut to introduce a clean car bill this session. “Momentum is building,” says Baird. “States are sending a powerful message to Washington that people want cleaner vehicles.”

WHAT YOU CAN DO: Send Detroit and Washington a message! Sign and mail the Clean Car Pledge on the envelope facing this page.

Foodservice giant says ‘no’ to antibiotics in poultry

Healthy food will soon get healthier for over 300,000 daily diners at corporate, college and hospital cafeterias run by Bon Appétit, a major U.S. foodservice company. By June, the company will only buy chickens raised without routine use of medically important antibiotics. The policy, developed with Environmental Defense, will also institute a purchasing preference for meats, dairy products and seafood produced with reduced amounts of antibiotics.

Most food animals routinely receive antibiotics with



Our campaign for safer food has reached college cafeterias.

their feed to help them grow faster and ward off the diseases that thrive in the stressful, unsanitary conditions of huge factory farms. This practice fosters new strains of germs resistant to the antibiotics, so that, increasingly, these life-saving drugs no longer work for people.

Bon Appétit’s policy mirrors bipartisan legislation we helped develop and introduce in both houses of Congress last year. The policy requires suppliers to certify in writing that they will not dose their animals with antibiotics except during actual or highly likely outbreaks of disease. “Bon Appétit knows about food, and we know about antibiotics,” explains Environmental Defense project manager Millie Baird, who helped write the agreement. “Together we figured out how the policy could be both feasible and affordable.”

The policy is similar to one we recently crafted with McDonald’s that will affect meat produced for 30,000 restaurants in 118 countries. “The idea is to use the purchasing power of companies like Bon Appétit and McDonald’s to end the misuse of antibiotics and make sure these critically important medicines continue to be effective for humans,” says our Health director Dr. John Balbus. “We call on other major purchasers to continue this trend.”

Administration plan fails to protect public from toxic mercury in fish

ONE IN SIX NEWBORNS NOW AT RISK OF BRAIN DAMAGE

Kate Graham/Bruce Coleman



Forty-three states have issued advisories limiting consumption of mercury-laden fish.

Federal data made public by Environmental Defense reveal dense concentrations of highly toxic mercury in nine states. The Bush administration's plan to reduce mercury exposure does not sufficiently protect public health, our experts conclude.

Mercury is among the most dangerous toxins known. Children are especially vulnerable and risk irreversible brain damage. According to EPA estimates released last month, mercury exposure in the womb puts one in six newborns at risk. Mercury pollution comes largely from coal-fired power plants and settles in lakes and streams, exposing those who eat contaminated fish.

Despite these dangers, EPA has proposed delaying cuts to mercury pollution from power plants for years, sparking protests nationwide. *The Washington Post* called it a "non-policy." Other industrial sectors such as waste incinerators already have slashed mercury pollution 90%, but the Bush plan goes easy on power plants, giving them until 2018 to reduce mercury by only 70%. It also establishes a pollution trading system that could leave mercury hot spots contaminated.

"The Bush administration mercury plan puts another gen-

eration of children needlessly at risk," says our president Fred Krupp. Utilities argue mercury comes from global sources, so local controls won't help. But our new report, *Out of Control and Close to Home*, reveals that local sources create mercury "hot spots"—

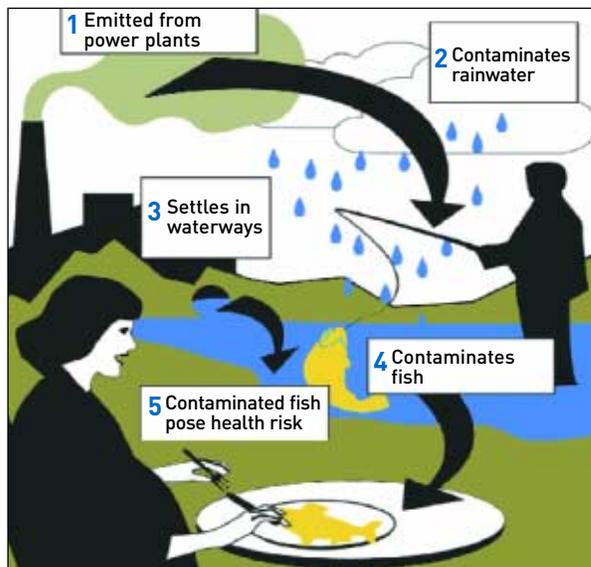
including areas of Florida, Illinois, Maryland, Michigan, North Carolina, Pennsylvania, South Carolina, Tennessee and Texas.

EPA's plan could allow contamination of these hot spots to continue. It allows larger polluters to buy credits from cleaner companies and avoid their own cuts. This could keep mercury levels high in the most-polluted communities. "The administration's mercury plan sacrifices public health by letting polluters off the hook," says our air expert Michael Shore.



What you can do: Contact EPA to demand tighter limits on mercury. Visit www.environmentaldefense.org/action to send a message or read our full report.

The mercury cycle



Design for Social Impact

Get a line on healthy fish



Farmed or wild? It makes a difference.

New health warnings about seafood seem to surface regularly. Recently the federal government issued an advisory about high mercury levels in some types of tuna. *Science* magazine published a study warning about PCBs, dioxins and pesticides in farmed salmon. With so many sources of information, how can consumers know which fish is safe to eat?

Environmental Defense has the answers. We've updated our online Seafood Selector with health information on the most popular seafood. Now consumers can determine which fish are best for the environment and for their health. Our experts compiled data from more than 30 government agencies and scientific studies to create the comprehensive database.

"With one click, consumers now can get seafood health information never before available in one place," says our scientist Timothy Fitzgerald. For example, the Food and Drug Administration recommends pregnant women, women planning a pregnancy, nursing mothers and young children avoid shark, swordfish, king mackerel and tilefish. We also recommend, based on scientific studies, that they avoid wild striped bass and bluefish.

Cooking techniques we suggest, such as grilling instead of frying, also can reduce some toxins, although not mercury.



Visit www.environmentaldefense.org/go/seafood for more.

NEWS BRIEFS

Future shock: Global warming seen as major cause of extinctions to come

What do Boyd's forest dragons in Australia and smoky pocket gophers in Mexico have in common? Both could face extinction by 2050 if humans don't rein in global warming. These conclusions come from a first-ever global



Martin Harvey/Peter Arnold

Tiny candidate for oblivion? Boyd's forest dragon could lose its rainforest home.

analysis of the likely effects of climate change on biodiversity, published in *Nature* in January. According to the report, between 15% and 37% of the 1,103 land plants and animals the researchers studied would eventually become extinct as climate change renders their habitat unsuitable. This could mean the extinction of over one million species—one-tenth of the total worldwide. However, urgent action to minimize greenhouse gas emissions that lead to warming could save a substantial number of species, the researchers said.

"This study makes clear that, as our climate changes, the parks and preserves that currently harbor imperiled species may no longer be able to do so," says Environmental Defense attorney Michael Bean. "So we must encourage conservation outside these refuges. And we must address global warming."

The road less traveled: A committed advocate transforms transportation worldwide

Our transportation director Michael Repogle is frequently on the road, bringing clean transit to cities like Portland, Atlanta and Denver and crisscrossing the globe promoting transportation development that protects the environment and the poor.

"Car dependence pollutes cities, harms our health and worsens global warming," he says. "Unfortunately, many still equate more cars with progress."

Repogle is helping prove otherwise. His work has led to bicycle development projects in Central America and Africa, cycle rickshaw modernization in Delhi, measures to curb sprawl in the Czech Republic and clean-bus transit systems in a dozen cities, including Jakarta and Cape Town.

His influence helped lead the World Bank and the U.S. Agency for International Development to adopt programs reducing car dependence in the developing world. Maybe, with Repogle's help, more U.S. cities will go the same route.



Jeff Greenberg/PhotoEdit

In some developing nations, cars are not yet king.



William Campbell/Peter Arnold

A typical snowmobile emits as much pollution as 100 cars.

Battle rages over snowmobiles

All winter, highly polluting and disruptive snowmobiles have powered through the American backcountry. But a nationwide campaign is building to restrict and clean up these machines and snowmobile purveyors are fighting back. At the heart of the dispute is Yellowstone National Park, where a Wyoming federal judge recently set aside strict snowmobile limits that the Bush administration had long sought to overturn.

The Wyoming judge ordered the National Park Service to issue temporary rules for the rest of the season. The earlier rule aimed to protect wildlife and reduce pollution by phasing out snowmobiles in Yellowstone and Grand Teton national parks next year.

As the Yellowstone fight continues, we are pressing our case to strengthen nationwide emissions standards for snowmobiles set by EPA, which call for a 50% pollution cut by 2012. Most major snowmobile manufacturers already have models on the market capable of achieving far greater pollution cuts but resist applying this cleaner technology fleetwide. Environmental Defense and Earthjustice filed a lawsuit last January that would require EPA to adopt nationwide regulations that reflect the latest technology. The case will be argued in April.

Seeds of a good idea

No-Wait soil test kit is available for \$15 at www.biconet.com/testing/noWaitSoil.html.

University-based extension testing services offer tips specifically tailored to your region. To find one in your state, visit www.ag.ia-state.edu/othersites/educational.html.

A complete guide to home composting, including a chart showing what should go in and what should stay out, is at www.compostguide.com.

An overview of no-till methods is at csf.colorado.edu/perma/no_till.html.

A step-by-step no-till planting guide for the novice is available at www.pathtofreedom.com/backtobasics/agriculture/article_notillgardening.shtml.

A natural pesticide based solely on vegetable derivatives, Pyola is \$16.95 a pint from Gardens Alive at www.gardensalive.com.

An eight-ounce bottle of Bt spray is \$9.95 from Professional Pest Control Products at 800-434-4555 or www.pestproducts.com.

How to Get Your Lawn and Garden off Drugs by Carole Rubin; Harbour Publishing, \$9.95, contains specific advice on how to deal with garden pests.

Outwitting Critters: A Humane Guide for Confronting Devious Animals and Winning by Bill Adler, Jr.; Lyons and Burford, \$12.95, focuses on animal pests.



Richard Walker/Bruce Coleman

For many, the smell of fresh loam is an unmistakable sign of spring.

Green thumb

HOW TO PLAN YOUR NATURAL GARDEN

The snow has melted, and the ground is softening. It's time to plan your garden. Our first piece of advice is: Go natural. EPA warns that some pesticides and herbicides can cause cancer, affect the nervous system or disrupt the endocrine system. These chemicals kill not only pests and weeds but also toads, birds and beneficial insects, like ladybugs and bees. Their residues contaminate the food you grow, as well as the soil itself and local streams and rivers.

So, assuming you're planning a natural garden, here are some tips for a bountiful harvest.

• **Testing, testing.** Your soil's health fluctuates throughout your growing season as plant growth removes nutrients and the manure, compost or mulch you use causes chemical changes. Spring soil testing every two or three years can help you minimize fertilizer use, diagnose cultivation problems and identify possible contamination. Standard tests measure your soil's basic pH (its acid/alkaline balance)

and check nitrogen, phosphorous, potassium and calcium levels. Home soil testing kits are available, and university extension services will test your soil samples—often a composite taken from various locations around the garden. You'll have the results in two or three weeks.

• **That old black magic.** To make compost, start with a large, sturdy open-topped container and fill it with kitchen fruit and vegetable scraps. A mix of 75% brown and 25% green ingredients is ideal. Add grass clippings, weeds and last autumn's leaves. Turn your mixture with a pitchfork every few days. Don't be dismayed if it gets warm or hot—it's an indication of the aerobic breakdown of your materials. Hot compost piles will kill most plant diseases and most weed seeds. Within a year of starting the pile, your compost will be an excellent soil conditioner. Spread it as a one- or two-inch layer on your new plantings, and your compost should provide most essential nutrients.

Guest columnist Jim Motavalli is editor of E/The Environmental Magazine (for subscription information: 800-967-6572 or www.emagazine.com). Opinions are the author's and not those of Environmental Defense staff.

• **Try no-till.** Mother Nature doesn't till the soil. A natural mulch of dead plants and fallen leaves brings up the next year's crops. Gardeners, too, can use no-till methods to keep a thick mulch on their plots to feed the underlying soil and its hard-working earthworms. Mark off your no-till bed with rocks, then cover it with 10 sheets of newspaper to kill the grass and weeds. Cut holes in the paper for your plantings. This method drastically cuts down on weed growth and also reduces global-warming effects by keeping carbon in the soil rather than releasing it to the atmosphere during tilling.

• **Nature's pesticides.** In an ideal world, organic gardeners would produce beauti-

ful crops free of pest infestation or disease, but in the real world your garden sometimes needs a little help. Luckily, plants produce their own natural chemicals in self-defense against fungi, insects and animal predators. The bacterial insecticide *Bacillus thuringiensis* (Bt) produces a useful insect toxin that is available as an organic spray. Commercially available Pyola is a broadly useful spray that combines an insecticide derived from pyrethrum flowers with canola oil from rapeseed. Other common pests can be deterred by increasing soil alkalinity or acidity and interplanting insect-resistant plants such as marigolds and sunflowers.

By Jim Motavalli

Taxes got you down?



Minden Pictures

Join the Environmental Defense charitable gift annuity program or create a charitable remainder trust and receive immediate income and capital gains tax savings. In addition, you will be entitled to lifetime income from your gift.

To learn more about how your gift can help you and the environment, call toll-free 1-877-677-7397 or write: Anne B. Doyle, Environmental Defense, 257 Park Avenue South, New York, NY 10010.

ENVIRONMENTAL DEFENSE ACTION CENTER

Make politicians feel the heat on warming

The World Health Organization estimates 160,000 people die each year from side effects of global warming, ranging from malaria to malnutrition. The figure is one more indication of the grave dangers posed by climate change.

Fortunately, Senators John McCain and Joseph Lieberman are championing a cost-effective measure to reduce global warming pollution nationwide. Last year the measure fell just eight votes short of passing, defying expectations. It will return for a vote in coming months.

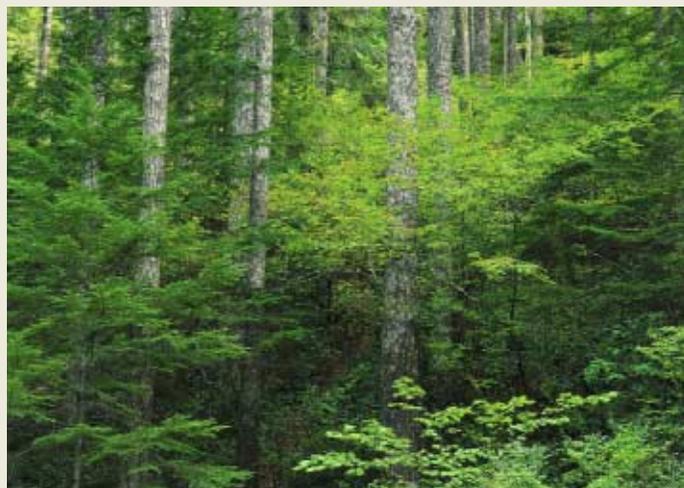
Let Washington politicians know you want action by becoming a "citizen co-sponsor" of the Climate Stewardship Act. Visit www.undoit.org.

Put the brakes on gas guzzlers

The Bush administration is considering an overhaul of fuel economy standards that will affect oil use and pollution for decades. The plan could close a loophole by regulating large trucks like the Hummer for the first time. But it won't necessarily raise fuel economy and could even encourage sales of heavy SUVs.

Increasing fuel economy will reduce oil dependence and global warming. U.S. vehicles now consume nearly as much oil as Saudi Arabia produces and emit more greenhouse gases than most nations. Meanwhile, average fuel economy is lower today than 12 years ago. Government must mandate increases to get industry to act.

 Write Transportation Secretary Norman Mineta and demand higher mileage standards for all cars and trucks. Visit www.environmentaldefense.org/action or send a letter to the U.S. DOT, 400 7th Street, S.W., Washington, DC 20590.



Saving forests is an idea worth copying.

Cut paper, not trees

Last year Environmental Defense prompted Citigroup to switch to 30% post-consumer recycled paper in its offices nationwide, saving enough wood each year to build 500 homes. Now your office can do the same.

Today's average office worker each year uses about 10,000 sheets of paper, consuming trees, water and energy. But a few simple steps, like buying recycled and making double-sided copies, can cut your company's costs and environmental impact. For tips on improving paper practices, including entertaining educational signs to hang above copiers in your office, visit www.environmentaldefense.org/go/lesspaper.



Earth index

- Percent of the population in Shanghai commuting by bicycle in 1990: 70%. Percent of the population in Shanghai commuting by bicycle today: 16%
- Recycling one aluminum can saves enough energy to light a 100-watt light bulb for 3.5 hours.
- Number of trees cut down to make the 500 pieces of advertising mail sent each year to every person in the country: 65 million.
- Earth's total water supply is 97.2% salt water and 2.8% fresh water.
- Percent of U.S. lakes and rivers that are unsuitable for fishing or swimming: 40%
- Estimated number of whooping cranes on Earth in 1941: 21. Estimated number of whooping cranes on Earth today: 430

What they're saying about Environmental Defense

"Usually I hear from environmental groups when they are complaining about something or filing a lawsuit. In this case Environmental Defense is trying to inspire companies to modify their behavior voluntarily....The diesel hybrid truck is not blue-sky. Mostly I like the idea of people, from everywhere, working together."

—Forbes columnist Jerry Flint, commenting on our project with FedEx to develop a fuel-efficient truck

New York City cleans up diesel

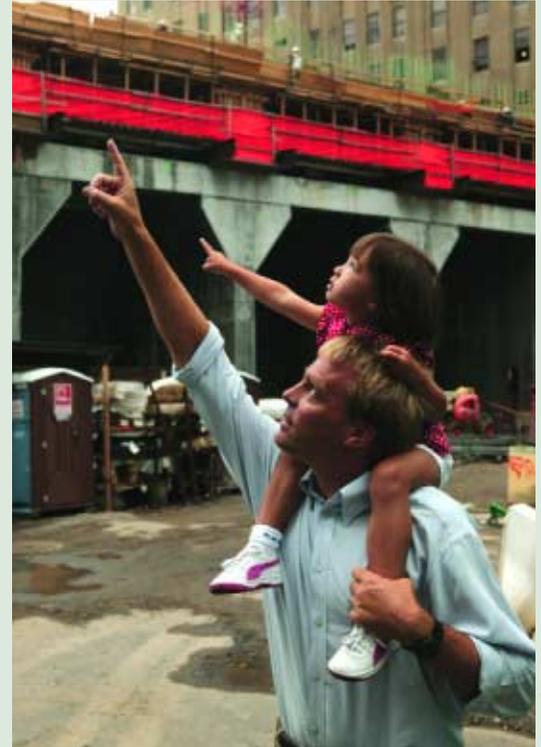
IN BREAKTHROUGH, CITY IS FIRST IN NATION TO CONTROL EMISSIONS FROM CONSTRUCTION EQUIPMENT

Living in New York City has never been easy, but a new law Environmental Defense helped craft will make it healthier, particularly for the one million New Yorkers who suffer from asthma. Recently signed by Mayor Bloomberg, the groundbreaking law will reduce diesel pollution at city construction sites by up to 90%. Such pollution is known to trigger asthma attacks, increased emergency room visits and cancer.

Our regional director Andrew Darrell got the idea for the new law as he walked by the World Trade Center construction site, a few blocks from his apartment. With workers busy at the site, Darrell noticed the pall of diesel exhaust hanging over the neighborhood. He knew that bulldozers and other construction equipment put out more fine particulate pollution than cars, trucks and buses combined.

"I realized that the valiant effort of New York to rebuild was actually threatening the health of New Yorkers," he says.

Darrell worked with New York Governor George Pataki to win a commitment that all state construction vehicles at the 16-acre ground zero site be retrofitted with the best available pollution control technology and use ultra-low sulfur diesel fuel. We then negotiated with agencies,



John Rae

On his daily trips to school with daughter Una, Darrell faced diesel pollution and decided to act.

suppliers and construction workers to require these measures for all heavy construction machinery used in public works projects throughout the city within two years.

The law makes New York the first major city to use its purchasing power to clean up diesel exhaust. Darrell believes other cities and states will follow, as the law causes cleaner fuels and retrofit technologies to become cheaper.

"We have an asthma epidemic, and we know what the environmental triggers are," Darrell points out. "Removing them is an obvious solution."



Solutions

Environmental Defense
257 Park Avenue South
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