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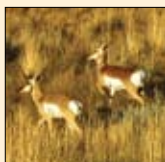
Spring 2009



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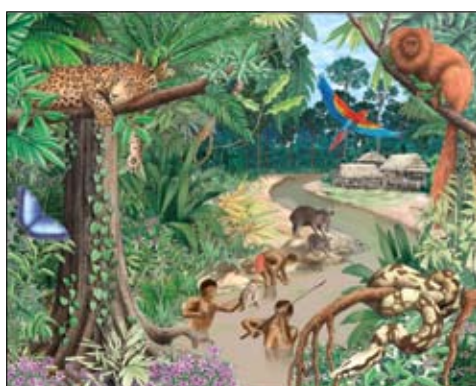
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Rainforests contain half the Earth's species and are vital to many life systems. Today, they also hold the key to a global climate treaty.

The race to reinvent energy

PRESSING THE START BUTTON ON AMERICAN INNOVATION



President Obama's policies present a dramatic opportunity to create jobs and solve global warming. Now Environmental Defense Fund must get Congress to act.

Less than a year ago, candidate Barack Obama promised an about-face in the nation's environmental policies. The economic stimulus bill passed in February, with its intention to slash America's dependence on fossil fuels, represents the government's biggest commitment to environmental protection in years. But major hurdles still lie ahead.

"This is a stunning departure from the past eight years," says Environmental Defense Fund president Fred Krupp. "Between the stimulus bill and the climate legislation taking shape in Congress, we're opening a new chapter in the fight against global warming." EDF helped shape the final stimulus package, which includes the following:

- \$20 billion investment in energy efficiency for buildings
- \$17.7 billion for mass transit
- Funds for renewable energy research
- Rebates for the purchase of greener appliances

Now we and our allies must win support from Congress for strong climate action. We've enlisted strategic partners in labor

and manufacturing to help show Congress that a cap on global warming pollution will create vibrant industries and jobs.

ADVISING THE ADMINISTRATION

Shortly after the November election, Krupp put our study *Manufacturing Climate Solutions* into the hands of Obama energy advisor Carol Browner. Her enthusiastic response paid a big dividend. Vice President Joe Biden named Environmental Defense Fund as expert panelist for the opening meeting of his Task Force on Middle Class Families, charged with making green jobs a pathway to a strong middle class.

The new opportunities are crucial for workers like Samuel Pagan. A former

Continued on p.6

A new deal for the environment



T. Charles Erickson

More Americans now work in the wind industry than in coal mining.

Franklin Roosevelt launched the New Deal in 1933 to help lift America out of the Great Depression. Most historians agree, however, that it was World War II that really turned things around.

Today, we are fighting another global war—against climate change. President Obama has launched that war in earnest by calling on Congress to enact a cap on carbon emissions. He has appointed a strong environmental team, including long-time EDF board member Dr. Jane Lubchenco as head of NOAA, the primary climate science agency.

Retooling America's energy infrastructure will not only help save the plan-

et, it also could save the economy. How? By creating jobs for people like Mike Gonzer, a plant manager in Michigan recently laid off from the auto industry but now working assembling wind turbines.

In a recent meeting at the White House, Lawrence Summers, Obama's chief economic advisor, told me that the key to economic recovery is to remake the energy sector. He likened government's role to that of a pair of scissors. One blade would be green spending in the Recovery and Reinvestment Act; the second blade would be a cap-and-trade program for carbon dioxide. Together, they can help us cut our way out of the recession.

Dealing with economic turmoil and global warming together makes perfect sense: Behind every clean energy technology—from wind turbines and solar cells to carbon capture and advanced lighting—a parts-and-labor supply chain runs through the heartland of U.S. manufacturing.

For example, Indiana-based SunRise Solar, a maker of solar-powered attic fans, gets plastic and stainless steel brackets from local plants, motors from Pennsylvania, wire from Illinois and thermostats from California. The fast-growing company has helped keep many other U.S. companies afloat in these rough times.

Strong cap-and-trade climate legislation will rapidly create new markets and millions of new jobs in virtually every sector of the economy. Rep. Henry Waxman (D-CA), chairman of the House Energy and Commerce Committee, has vowed to have a climate bill on the floor by Memorial Day. Momentum is also building in the Senate. Congress should do all it can to pass a strong bill, and quickly, in order to have maximum leverage for December's UN climate talks in Copenhagen.

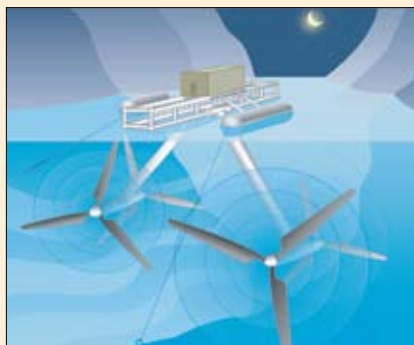
As the legislation moves forward, we will stand guard on Capitol Hill to make sure that no last-minute loopholes are inserted in the dead of night. The future of the planet is at stake.

Fred Krupp

Creating a clean future

Technology is on the brink of producing breakthroughs in the fight against global warming. Entrepreneurs are harvesting energy not just from the sun and wind but from ocean waves, grasses and even algae.

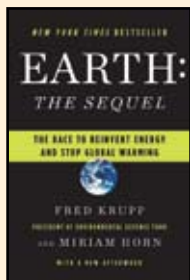
That's the message of the New York Times bestseller *Earth: The Sequel* by EDF president Fred Krupp and Miriam Horn, now in paperback from W. W. Norton. The new



edition updates progress by featured companies and includes vivid illustrations of how cutting-edge technologies like cellulosic ethanol and wave energy actually work.

"Krupp does what might seem impossible—he delivers a global warming book that leaves you feeling hopeful." —*Time*

"If you are worried that the world is heading toward climate catastrophe, here's a book to lift your spirits." —*Harvard Business Review*



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ENVIRONMENTAL DEFENSE FUND
feeding the ways that work

Solutions

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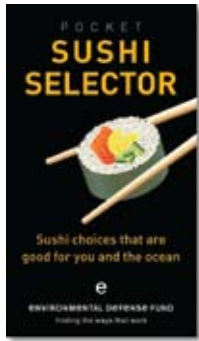
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Talk back

Please correct yourself!



Please look at the picture on the cover of your Sushi Selector. Sushi is rice mixed with vinegar and sugar. It may have tuna rolled inside it, or a number of other fish products placed on it, but sushi is not fish.

Please correct yourself!

Bets Lawrence, Hawaii

Our scientist Tim Fitzgerald responds:

Mr. Lawrence is correct—technically sushi is just vinegared rice, not fish. However, we decided to go with an image and title recognizable to most U.S. sushi lovers. See edf.org/seafood.

What about wind pollution?

I worked on a maintenance crew servicing 259 wind turbines in northwest Iowa.



While I believe power produced from wind turbines is a good alternative source, there are some problems: moving the energy

produced is not efficient because of inadequate transmission systems; there can be pollutants from operation of the turbines; and there needs to be recycling or cleanup after the useful life of the wind turbines.

Roger Skelton, Rembrandt, Iowa

Our renewable energy specialist Colin Meehan comments:

We currently have enough transmission capacity in most of the windy states to allow a

significant amount of new wind power to be developed. Passing a national cap on global warming pollution will spur even more renewable energy development, as well as the transmission infrastructure it requires.

However, as you point out, wind farms can create local environmental problems, from leaking oil to serious habitat damage. On the positive side, wind farms create much less local environmental damage than coal, natural gas or nuclear power plants. And much of the material is recyclable. In fact, a small cottage industry is already developing around remanufacturing old wind turbines.

To address these issues, EDF helped found the American Wind Wildlife Institute, a consortium of wind developers and environmental organizations. The institute is working to establish rules and incentives for wind developers to site, build, operate and decommission turbines in an environmentally conscious manner.

Help us improve Solutions!



Would you like to influence what EDF writes about in *Solutions*? Email editor@edf.org to join our Reader Panel. Please include your name and mailing address in your email, and feel free to mention any suggestions when you write.

We want to hear from you!

Obama advisor joins EDF



Mark Gibson/Corbis

Holstein negotiated help for the Klamath.

Elgie Holstein remembers the first time he sat down with PacifiCorp to negotiate removing the utility's dams from the Klamath River in California and Oregon—the focus of years of contentious debate among farmers, environmentalists and Indian tribes.

"PacifiCorp had really been beaten up in the press," recalls Holstein. "They were wary." Instead of ultimatums, Holstein offered them science. "I suggested we cooperate on a plan for examining water quality related to the dams," he says. "They jumped on it."

Negotiators reached a tentative agreement last fall to remove the dams in what may be the largest river restoration project in U.S. history. Holstein insists his role was small—he left the process last year to advise the Obama campaign on energy—but injecting facts into an emotional debate helped build trust among the negotiators.

Holstein will bring his skills in negotiating difficult water issues to EDF as the head of our Center for Rivers and Deltas. "Unraveling longstanding conflicts and healing the environment in places like the Colorado River Delta will take creative thinking and an even-handed approach," says Holstein. "I came to Environmental Defense Fund because it is recognized for both."



Water diplomat
Elgie Holstein

What they're saying about Environmental Defense Fund

"Without the persistence, devotion and long-term support of EDF, Hawaii would not have this landmark conservation program."

Paul J. Conry, Hawaii's administrator of Forestry and Wildlife, on EDF program preventing pollution from reaching Hawaii's coral reefs.

PURCHASING POWER

With EDF's help, Wal-Mart takes green business global

Call it a smart business decision. To satisfy the growing demand for green building materials, a California-based startup called CleanBoard now manufactures drywall in a solar-powered factory, using residue from coal-fired power plants as raw material. Even its paper coating is recycled.

"To achieve our goals, we examined every aspect of our supply chain from the sourcing of raw materials to the transportation of finished goods," explains the company's founder, Rod MacGregor.

Imagine if a single retailer could demand such environmental performance from thousands of factories? Environmental Defense Fund set out to help achieve this goal.

The products we buy today are only as green as the energy and materials that go into them—the supply chain. Not long ago, it was common for manufacturers to oversee a product's entire life cycle. Today, that model has been replaced by a vast global supply chain moving products from distant factories to your neighborhood mall.

The environmental costs of this supply chain are immense. For example, U.S. demand for products from China—\$321 billion in 2007—has contributed to China's monumental environmental challenges: fouled air, despoiled rivers and a growing share of the world's global warming emissions.

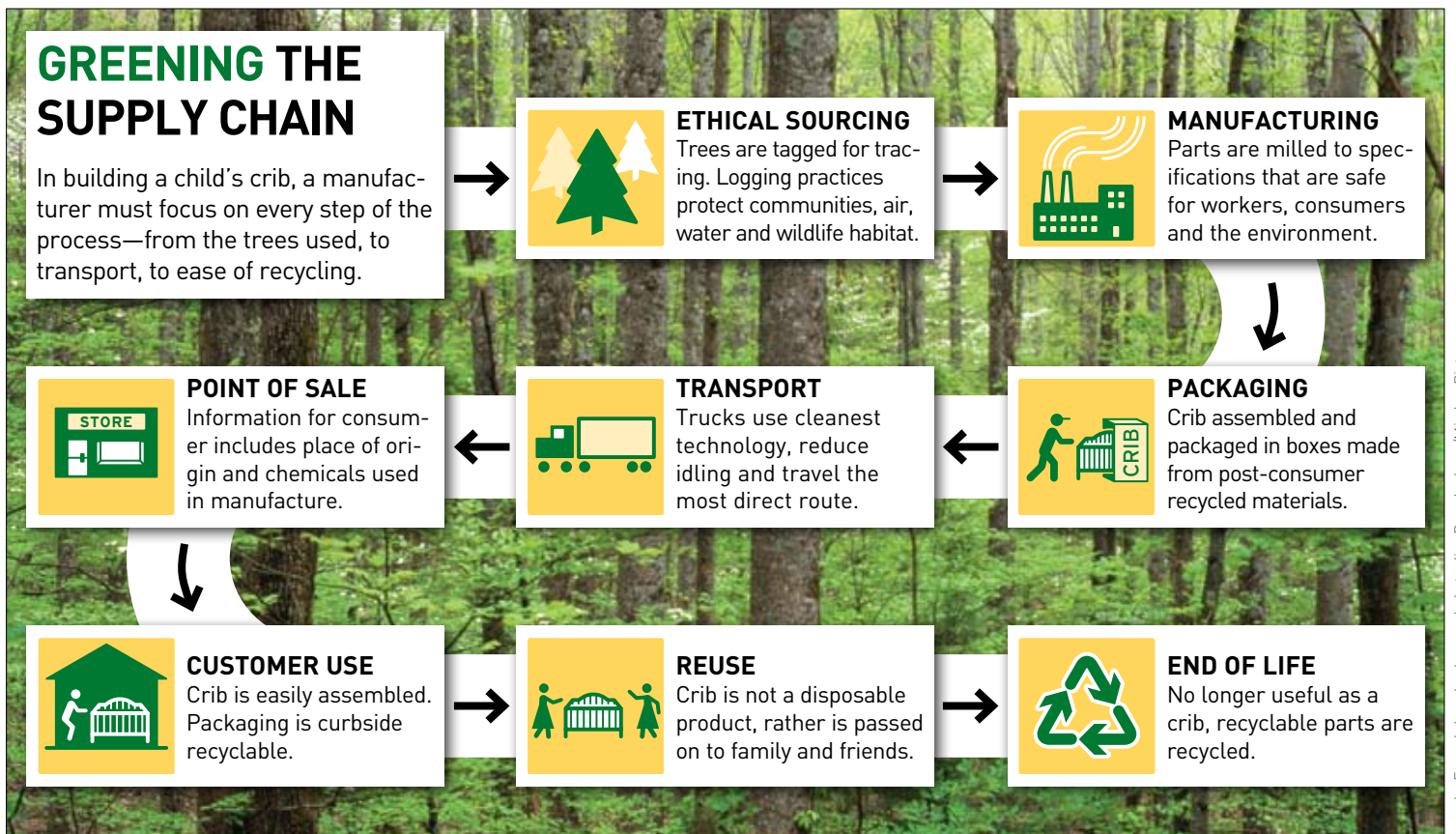


Ullstein-ecopix/Peter Arnold

Wal-Mart wants to green its Chinese supply chain.

A GREENER VISION FOR CHINA

As China's biggest export client, Wal-Mart has taken a special interest in greening China's supply chain and has the clout to make things happen. When the retailer recently invited 1,000 of its Chinese suppliers to an environmental summit in Beijing, suppliers were eager to attend. The company announced ambitious goals:



Icons by Funnel, Inc.; background photo Jim Brandenburg/Minden Pictures

- Wal-Mart's top 200 suppliers in China are to improve energy efficiency 20% by 2012. The company's factory audits also will look at air emissions, wastewater discharges and the handling of toxic substances.
- By 2012, all direct suppliers must source 95% of their production from factories with Wal-Mart's highest ratings for environmental and social practices.

"We're showing suppliers that through this lens of sustainability, there are actually cost-saving opportunities," says Matt Kistler, Wal-Mart's senior vice president for sustainability.

60,000

Wal-Mart suppliers worldwide

As the only nonprofit with offices in Beijing and Wal-Mart's home town of Bentonville, AR, we work closely with the company on supply chain issues. We take no money from Wal-Mart, but the partnership is strategic for both parties.

The biggest opportunity for creating environmental change is the estimated 90% of Wal-Mart's environmental footprint attributed to its 60,000 worldwide suppliers," says Elizabeth Sturcken, our managing director for corporate partnerships.

Compliance remains a thorny issue. With EDF support, Wal-Mart has changed its standard contract to require supplier certification of compliance with all Chinese environmental laws.

FROM SEAFOOD TO FOREST PRODUCTS

FROM SEAFOOD TO FOREST PRODUCTS

Wal-Mart is examining its full range of products. For instance, it wants all the seafood it sells in the United States to be certified as sustainable by 2011.

When EDF determined there was no credible certification for farmed seafood, we collaborated with allies to strengthen the industry association charged with aquaculture certification.

Wal-Mart is reforming its wood purchases and looking to groups like EDF and World Wildlife Fund for guidance. With its supply chain in the Far East plagued by illegal logging and phony labeling, Wal-Mart is switching to more transparent lumber sources around the world. "We need a clear chain of custody from start to finish," explains our project manager Michelle Harvey.

We want our work with Wal-Mart to be emulated by other large retailers. Environmental improvements to the intricate trail that links the world's markets won't happen overnight, but the process is well underway. EDF project manager Andrew Hutson says, "As smart companies find real cost savings, the concept is gaining steam."



AP Photos

We helped Wal-Mart set strict standards for farmed seafood.



Zinn Photography/Sun Edison

Energy-conscious companies have much to learn from installations like this Sun Edison solar farm.

Finally, a place to share green innovations

When Environmental Defense Fund and FedEx developed a cleaner, more fuel-efficient delivery truck, we went directly to other delivery companies to share the innovation. Now many fleets are trying out the new diesel-electric hybrid technology.

Our new Innovation Exchange website will make it easier for companies to share such promising ideas faster.

"Major companies have come to us saying they

want to make their operations sustainable but don't know how to go about it," says David Witzel, director of the exchange. "A knowledge-sharing network was needed."

For a wide variety of industries, the Innovation Exchange offers case studies, networking opportunities and a frequently updated blog. Soon, expanded interactive features will allow businesses to share their experiences



Information guru David Witzel is overseeing our new Innovation Exchange. edf.org/innovation

online and sign up for training programs. The information is free.

"In today's tough environment, no company can afford to miss out on proven strategies to cut costs and build reputation," says Gwen Ruta, our vice president of corporate partnerships. "The Innovation Exchange provides the information and inspiration for companies to achieve market leadership and meet key environmental demands worldwide."

Among the first visitors to the new exchange: employees of Microsoft, Nortel, Wells Fargo and other leading corporations.



See how the FedEx hybrid electric truck works in a short video at edf.org/FedExStory

Countering climate falsehoods

Continued from p.1



Paul Glendel/Peter Arnold

Job generator: Each wind turbine contains about 8,000 parts.

Pennsylvania steelworker, Pagan was looking for more job stability. With a little training, he easily stepped into a new career assembling the structural backbones of wind turbines. “It’s a new industry,” he says. “There’s opportunity here.”

“Our nation is rich with a skilled workforce that is waiting for the economic opportunity that cap-and-trade legislation will bring,” says Krupp.

How climate action will affect jobs is the subject of a pitched battle that may determine the fate of climate legislation. Opponents in the oil industry and the U.S. Chamber of Commerce are again spending millions to mislead Americans with the falsehood that climate policy is too expensive in a recession. Similar arguments about gas prices stymied a climate bill in 2008.

This time, however, we are in a position to win. “In the fight for climate change legislation, we have advantages we’ve never had before,” said Krupp. “We have solid majorities supporting legislation in both houses of Congress. We have sympathetic committee chairs to guide the action. And we now have a president who understands the nature of the emergency. The stars are aligning at just the right time.”

WHAT YOU CAN DO: Send a message to your senators and representative urging them to help unleash our green energy future; visit edf.org/capcarbonnow

LESS CARBON = MORE JOBS

When Jackie Roberts, EDF director of sustainable technologies, began to research how the U.S. job market will benefit from global warming legislation, she didn’t expect to deliver her work directly to the vice president of the United States. But that’s exactly what happened on February 27, when Roberts and EDF president Fred Krupp met with Vice President Joe Biden and several cabinet officers, including Energy Secretary Steven Chu and Labor Secretary Hilda Solis.

Roberts’ new website, *lesscarbonmorejobs.org*, profiles 1,200 companies in the renewable energy and energy efficiency fields from Florida to Colorado primed to create new jobs when Congress enacts a cap on global warming pollution. Released at the launch of Biden’s task force, the maps show hundreds of communities in coal country, the rust belt and other manufacturing regions poised to benefit.

A POTENT MESSAGE TO CONVINCE CONGRESS

Our goal is to show members of Congress how a cap on carbon will create economic opportunities for their constituents.



Our new green company website, (lesscarbonmorejobs.org), 1,200 bright spots in a dark economy.

Our research found that 42% of the new-energy companies surveyed had growth in sales over the past one to two years. Half were planning to hire more staff. Many were small companies, a key engine of U.S. economic growth.

Abe Breehey, an official with the International Brotherhood of Boilermak-



Eileen Colton

Jackie Roberts: The White House called.

A wind company hires former autoworkers in Michigan.

ers, an EDF ally, said, “The demand for climate solutions will create job opportunities across the economy. We can put American ingenuity to work to reduce emissions, with all the necessary labor and materials to make it happen.”

Among the business leaders highlighted is Jeff Metts, president of

Dowding Industries, a Michigan manufacturer hiring laid-off autoworkers to build wind turbine components.

“This business is growing exponentially,” Metts said. “We’ve tapped into a workforce eager to apply their skills from previous jobs, and the result has been incredible. We’re ready to do much more.”



Frans Lanting

Valuing forests enough to save them

One day in December 2002, Herculano Porto thought the world was coming to an end. Machete in hand, he was clearing brush from the forest floor beneath 150-foot-tall Brazil nut trees in Pará state in the Brazilian Amazon when he saw four men with guns and chainsaws coming through the forest.

Herculano, who makes a precarious living collecting nuts and fishing, gathered his things and paddled back across the Anfrizio River to his home. Gradually, all around him, the forest began to fall.

For the last two decades, similar scenes have been playing out across the Amazon. Each year, ranchers, farmers and loggers have cleared and burned some four million

137 unique species become extinct every day due to tropical deforestation

acres of rainforest—an area nearly the size of New Jersey—releasing massive quantities of greenhouse gases into the atmosphere. Business as usual, some models predict, could destroy half the Amazon forest by 2050.

On that December day, Herculano didn't challenge the intruders. But over the next two years he defied death threats and teamed up with Environmental Defense Fund partners to help establish an

“extractive reserve.” Inside the reserve, clear-cutting is prohibited but forest dwellers can continue their fishing and nut gathering. In exchange for land rights, education and health care, Herculano and other *ribeirinhos*, or river folk, agreed to manage the forest sustainably.

“Extractive reserves and indigenous lands, where people on the ground have a direct stake in the forest's survival, offer the best protection for rainforests,” says our anthropologist Dr. Stephan Schwartzman, who has spent three decades working in the Amazon. Using satellite data, Schwartzman has documented that reserves stop deforestation.

Extractive reserves, indigenous lands and parks now cover nearly 40% of the Amazon. But that leaves huge swaths of forest unprotected. And in practice it has been difficult to protect sparsely populated areas because of pressure from ranchers, illegal clearing and a lack of economic incentives.

When a group of rice farmers recently challenged the existence of the four million acre Raposa Serra do Sol

Indigenous Reserve near the Venezuelan border, EDF funded our partner, the Instituto Socioambiental, to bring in an indigenous lawyer from Raposa to argue before Brazil's Supreme Court, the first indigenous attorney to do so. In a significant victory, the court ruled to support the reserve.

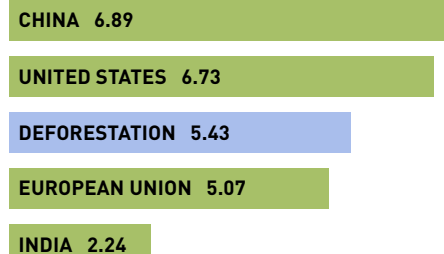
A GLOBAL SOLUTION

Still, the clearing and burning of rainforests continues—in Brazil, Indonesia and elsewhere. Worldwide, driven by the profits to be made from tropical hardwoods, soybeans and beef, between 20 and 40 million acres of rainforest are lost annually.

Tropical deforestation not only destroys ecosystems, it produces nearly 20% of the planet's global warming

CARBON HEAVYWEIGHTS

Global CO₂ emissions in 2008 (in billions of tons)



Deforestation produces more global warming pollution than the entire EU.



Peter Arnold

Will we continue to do this to the “lungs” of the planet?

emissions. “Any plan to address global warming must include tropical forests, or it will fail,” says EDF Climate director Peter Goldmark. “The world has just one chance and little time to get this right.”

forestation and Degradation, or REDD, gained traction at recent UN climate talks in Poland, ensuring that it will be on the agenda in Copenhagen this December, when the next climate treaty will be negotiated.

Meanwhile, at our partners’ sug-

In 2005, we joined with Brazilian allies to propose a solution: provide incentives that make rainforests worth more alive than dead. Our proposal would offer compensation from industrialized nations in the form of tradable carbon credits to developing nations that reduce deforestation. It would also allow them to modernize their economies.

The concept, known as Reducing Emissions from De-

gestion, Brazil has pledged to cut deforestation 70% over the next decade. “This is enormously important,” says Schwartzman. “It is the first time a major developing country has stepped up and made a commitment to bring down its total emissions.”

When there are profits to be made by keeping tropical forests standing, the same entrepreneurial energy that has brought them down at such an alarming

As long as forests are worth more as cattle ranches or palm oil plantations, forests will continue to disappear.

rate will become an equally powerful force for their protection.

“As long as forest lands are worth more as cattle ranches or palm oil plantations, forests will disappear,” says Schwartzman. “An international carbon market can give them the value they need to survive.”

Remembering CHICO MENDES

Twenty years ago, the legendary union activist Chico Mendes was gunned down by an enraged cattle rancher irked that he’d been denied the right to cut down a tract of Brazilian rainforest.



J.B. Forbes

Mendes’ voice may have been silenced, but his legacy lives on.

Because Mendes had won international environmental prizes, his murder, unlike the 1,500 or so previous murders for hire in land conflicts in Brazil, became world news.

Illiterate until age 18, Mendes had eked out a living as a rubber tapper, collecting latex from the Amazon’s rubber trees. Yet he rose to become Brazil’s environmental conscience. He not only organized his fellow tappers into a rural workers’ union but also formed them into human barriers whenever cattle ranchers threatened the rainforest that was their livelihood.

In December, on the 20th anniversary of his assassination, EDF anthropologist Dr. Stephan Schwartzman traveled to Brazil to receive the Chico Mendes Prize. The Acre state government recognized 20 people who were important in Mendes’ life. “I was deeply honored to be among them,” says Schwartzman.

In 1987, Schwartzman had brought Mendes to Washington, DC, to press development banks to curtail loans for Brazil’s road-building projects until local people’s rights were considered.

Our alliance forced the Brazilian government to change its policies. As part of the Mendes legacy, the extractive reserves he helped create have become a bulwark against deforestation in the Amazon—and a source of hope in solving the world’s climate crisis.

Why we need to save rainforests

Here are five reasons:

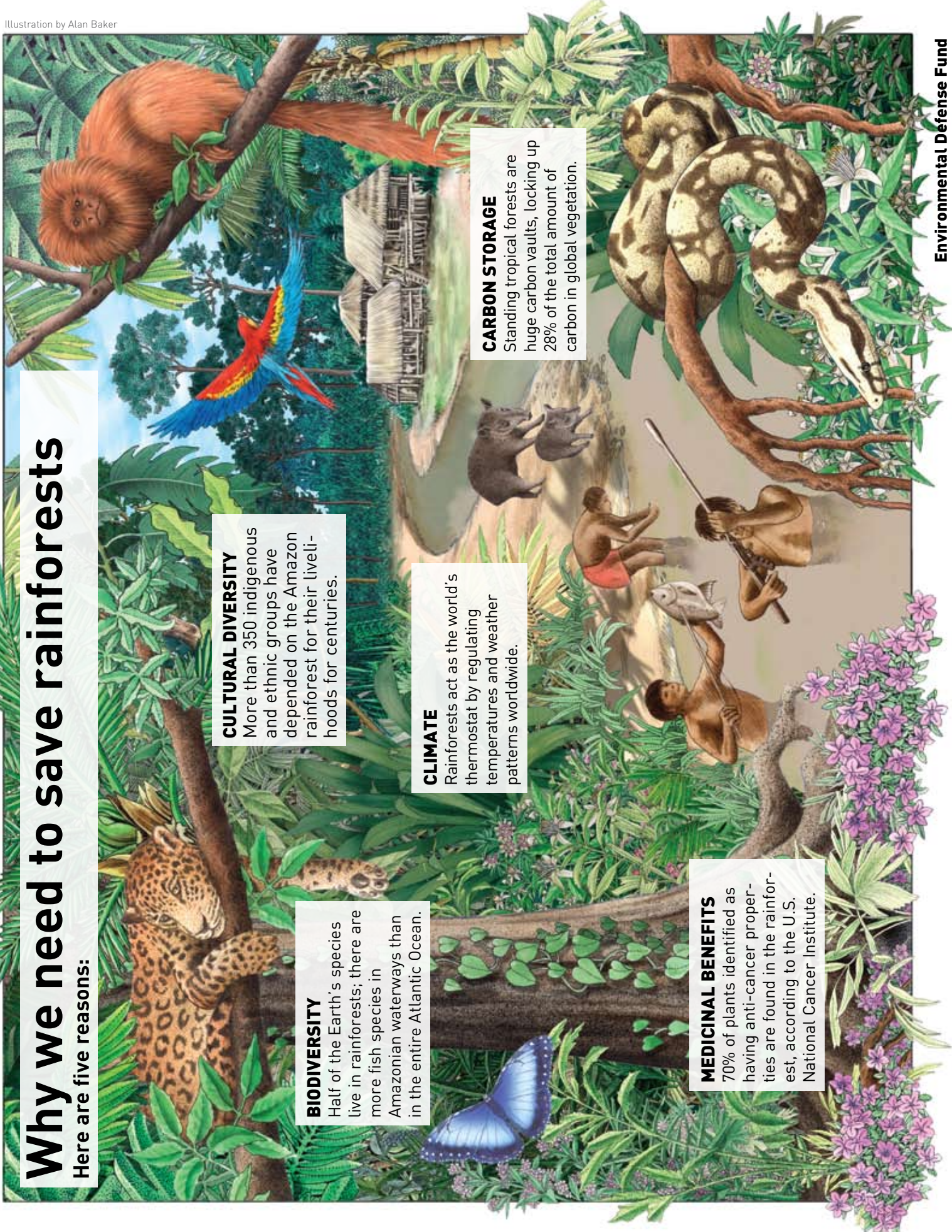
BIODIVERSITY
 Half of the Earth's species live in rainforests; there are more fish species in Amazonian waterways than in the entire Atlantic Ocean.

CULTURAL DIVERSITY
 More than 350 indigenous and ethnic groups have depended on the Amazon rainforest for their livelihoods for centuries.

CLIMATE
 Rainforests act as the world's thermostat by regulating temperatures and weather patterns worldwide.

CARBON STORAGE
 Standing tropical forests are huge carbon vaults, locking up 28% of the total amount of carbon in global vegetation.

MEDICINAL BENEFITS
 70% of plants identified as having anti-cancer properties are found in the rainforest, according to the U.S. National Cancer Institute.



Green living

Kids who dream in green

THE NEXT WAVE OF ENVIRONMENTAL ACTIVISTS IS THE YOUNGEST YET

The popular view that kids raised on TV and the Internet are fated to become passive consumers is contradicted by a new wave of informed environmental activism that reaches all the way down to elementary school.

Jordan Reichgut and Alex Scaperotta were only in third grade when a school screening of Al Gore's documentary about climate change, *An Inconvenient Truth*, inspired them to become environmental campaigners. The pair, now fifth graders at Cider Mill School in Wilton, CT, launched "Little People, Big Changes," which now has a website and a solid record of accomplishment.

Alex and Jordan regularly team up to talk to student groups and set up informational card tables at supermarkets, libraries and Earth Day celebrations. Largely through their efforts, nearly 200 families in the town of Wilton signed up to pay extra on their utility bills to ensure that renewable energy goes into the regional grid. The signups have earned Wilton a pair of solar panels to be installed at town schools.



Tim Connor

The return of flower power: Children are taking pollution into their own hands.

TAKING ACTION LOCALLY

Heeding the slogan, "Think globally. Act locally," the boys created an anti-idling campaign to convince motorists to fight climate change (and local air pollution) by not leaving their cars and trucks running.

According to a new Environmental Defense Fund report, *Idling Gets You Nowhere*, idling cars and trucks in New York

City alone produce 760 tons of smog-forming nitrogen oxides every year. That's the equivalent of 3,000 trucks, each driving a million miles. Pollutants from needlessly running engines are associated with a variety of health risks including cancer, asthma and heart disease—and children are especially vulnerable.

"If you're stopped for more than ten

Calling all youth!

RESOURCE CENTER

Little People, Big Changes promotes its anti-idling campaign and green energy choices. littlepeoplebigchanges.com

EDF's **Idling Gets You Nowhere** report summarizes the case against unnecessary idling. edf.org/stopidling

EPA's **National Idle-Reduction Campaign** (part of Clean School Bus USA) offers a calculator to determine how much fuel is saved by not idling. epa.gov/OMS/schoolbus/antiidling.htm

Find environmental activism websites for young people at **Green kids online**. greenliving.suite101.com/article.cfm/green_kids_online

Environmental Enforcers is part of the United Puerto Rican Organization of Sunset Park. uprosec.org 718-492-9307

Van Jones' **Green for All** promotes green jobs for young people and others interested in working on environmental and social justice issues. greenforall.org

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

seconds, you save fuel by turning off the engine,” Alex said. “So we created a slogan, ‘If you’re stopped for more than ten, turn it off and on again.’” Jordan and Alex created bumper stickers and t-shirts that spread their message all over town. For their efforts they were awarded a Climate Change Leadership Award from Connecticut Governor Jodi Rell.

ADVOCATING GREENER SCHOOL BUSES

Some 1,500 miles away in Austin, TX, another group of fifth graders also zeroed in on unnecessary vehicle idling. Their campaign at Casis Elementary pushed the school to educate parents about the dangers of idling. “It might not have an impact on the world, but it might have an impact on our neighborhood,” said fifth-grader Isaac Brown.

Similarly, EDF has been helping youth groups fight for laws to reduce school bus idling. In the Conroe district near Houston, we recruited student volunteers to carry test equipment in their backpacks



Alex von Kleydorff

Alex Scaperotta had a bright idea for cutting pollution.

as they traveled on the buses. “We found that the air kids were breathing inside the bus was sometimes five to ten times worse than the air outside because of diesel pollution,” said our staff scientist Elena Craft.

CLEANING UP THE NEIGHBORHOOD

The new wave of children’s environmental activism cuts across income levels. In 1998 three 14-year-olds in Brooklyn’s Sunset Park neighborhood founded the Environmental Enforcers as part of UPROSE, a Latino community organization. The group’s work includes air monitoring of diesel trucks on the Gowanus Expressway, which bisects their neighborhood.

Joaquin Brito, a 17-year-old volunteer, started out by collecting air samples. In 2007 he testified before a state commission on improving city air quality. Brito plans to study environmental engineering in college this fall. “Facing our environmental problems is something we have to do for our future,” he says.

These young people do seem to think more about the future than earlier generations did. Their hope is to set an example. They’re planting seeds, and working to ensure that they take firm root.

—Jim Motavalli

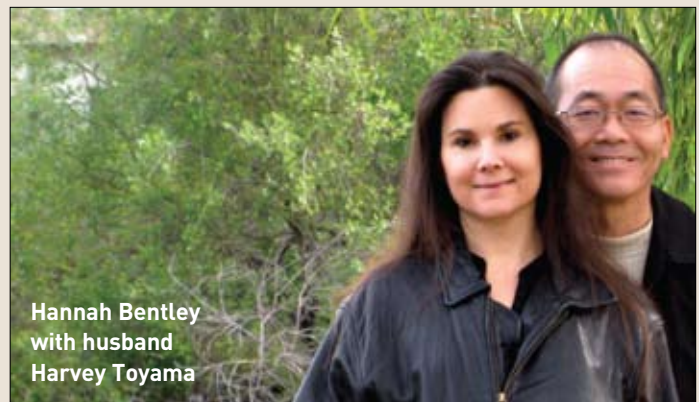
Going to work to defend the desert

When the Bureau of Land Management designated a section of California’s Mojave Desert as the site of a radioactive waste dump, Hannah Bentley, a prominent environmental lawyer, went to work. She joined forces with Native American tribes and environmental groups and together they won protection for the area as critical habitat for the endangered desert tortoise. From that day on, she was able to camp in the desert she had helped protect. It remains one of her proudest achievements.

Bentley goes to work each day on behalf of the planet: preserving endangered species habitat, protecting vulnerable populations from unjust environmental harm and helping frame policy around California’s historic global warming act.

Bentley has bolstered her environmental legacy by designating Environmental Defense Fund as a beneficiary of her IRA and 401(k) retirement plans. Gifts through estate plans provide EDF with resources to meet the most serious environmental challenges of the future.

“As an environmental lawyer, I have long realized the importance of talking with all parties,” she says. “I like the way EDF takes the big picture view and makes an effort not to alienate key players. With its ability to build bridges, EDF will be needed more than ever in the years ahead.”



Hannah Bentley with husband Harvey Toyama

Leave a legacy

To include EDF in your will or trust, we suggest this language:

“I hereby give ____ to Environmental Defense Fund, Incorporated, a not-for-profit membership organization incorporated by the laws of the State of New York, having as its principal address 257 Park Avenue South, New York, NY 10010.”

Contact Nick Pitaro, toll-free, at 1-877-677-7397 or at ospreads@edf.org. Or visit us at edf.org/plannedgiving

Hope for endangered Gulf sea turtles

Sea turtles have been around for at least 110 million years, but today all of them are either endangered or threatened. Off the west coast of Florida, endangered loggerhead turtles have been dying in increasing numbers, accidentally caught up in longline fishing gear. In response, the National Marine Fisheries Service plans to suspend longline fishing. EDF is working hard on a solution to keep fishermen in business while ensuring the steady recovery of turtles and ailing Gulf fisheries.

Currently vessels deploy lines over seven miles long, baited with hundreds of hooks. Our plan is to finance a conversion to fishing gear that does not harm sea turtles.

“We are working closely with both fishermen and regulators,” says Heather Paffe, director of EDF’s Gulf of Mexico Oceans program. “A small investment will go a long way towards protecting endangered sea life and keeping our coastal businesses viable.”

Protective measures secured by EDF off the Texas coast have allowed Kemp’s ridley turtles to rebound locally for a record fifth straight year.

Sea turtles and other marine life also will benefit from our campaign to switch troubled fisheries to “catch shares.” Under

this system, each boat is assigned a percentage of the total allowable catch. Captains can fish sensibly rather than racing to catch fish as quickly as possible. This translates into increased dockside prices while reducing sea turtle entanglements and the inadvertent catching of other fish. Regulators recently approved a catch share for grouper and tilefish in the Gulf.

Paffe is optimistic. “Experience has shown us that environmental solutions are most successful when they make economic sense,” she says.



ONLINE: Bringing back endangered sea turtles. Watch our video at edf.org/gulf

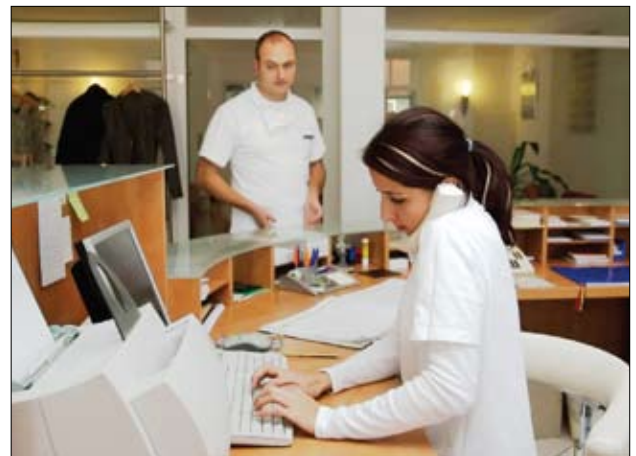
Our partnership with KKR: the bottom line is green

“Pollution by definition is waste, and waste costs money,” says Gwen Ruta, our VP of corporate partnerships. Helping companies cut costs through environmental innovation is the driving force behind our successful Green Portfolio Project with private equity giant Kohlberg Kravis Roberts (KKR).

It’s the first attempt by a nonprofit group to green the portfolio of a private equity firm, prompting *Fortune* magazine to call the partnership “significant” and “surprising.” KKR has ownership stakes in 47 companies, including popular names like Toys “R” Us and Sealy.

We began by working with three KKR companies: U.S. Foodservice, PRIMEDIA and Sealy Corporation. All told, we helped initiate improvements that saved \$16.4 million, cut paper use by 3,000 tons and reduced greenhouse gas pollution by more than 25,000 tons. “These initial results provide a high note in this low economy,” said Ruta, “and we’re just getting started.”

The initiative now spreads to four



Busy round-the-clock, KKR’s hospitals have ample opportunities to cut energy use.

other KKR companies: Accellent, Biomet, Dollar General and Hospital Corporation of America.

EDF accepts no funding from KKR or any other corporate partner. We will make the Green Portfolio Project strategies freely available to other companies through our online Innovation Exchange (*see story page 5*).

According to KKR managing director Ken Mehlman, “Going forward, we will continue to implement Project tools to generate more cost savings and environmental benefits at other portfolio companies.”



Norbert Wu/Minden Pictures

EDF enlisted fishermen to help save loggerheads.

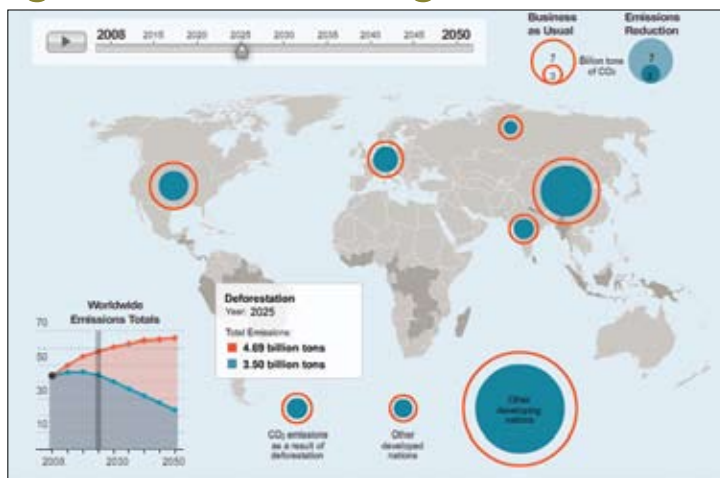
Map your global warming future

U.S. greenhouse gas emissions are currently three times those of India. Ever wonder if that rapidly developing country's emissions will surpass those of the United States? Now the answer is at your fingertips.

EDF's new interactive global map compares two

paths forward on global warming: one according to business as usual and the second incorporating our proposed reductions—a 50% cut in global emissions by 2050. That's the minimum reduction scientists say is necessary to avert serious climate change.

The data take into account different reduction targets for developed and developing nations, as is likely under any



To take the map for a test run, visit edf.org/emissions

international climate agreement. By sliding the scale on the map to a desired year—and highlighting a region by holding the mouse over it—users can compare future emissions.

“The map allows you to see the implications of policy choices,” says our GIS specialist Peter Black. “What actions will get us where we need to be to save the planet?”

Getting the lead out



Each year, some 400,000 newborns are exposed to dangerous levels of lead.

Lead is a potent neurotoxin, but not until recently were the serious health risks of very low levels of lead established. New studies show that lead levels even lower than EPA's 1978 allowable maximum caused lowered IQ's in children, aggressive behavior in teenagers and car-

diovascular disease in adults.

Hence we welcome EPA's decision to tighten the lead standard tenfold. The new standard, 0.15 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), is within the range recommended to EPA by its science advisors. But EPA's own analysis shows that to prevent a measurable decrease in IQ for the most vulnerable children, the lead standard should be set as low as 0.02 $\mu\text{g}/\text{m}^3$.

EDF has worked to reduce lead exposure since the 1970s, when children's average blood level was seven times higher than today. In 1985, we played a major role in banning lead from gasoline.

“This will help protect children,” says John Balbus, M.D., director of our Health program. “But the science justifies an even lower standard.”

Air quality in national parks: Persistence pays off



For park visitors, seeing is believing.

The road toward clean air in America's national parks has been a long one. As far back as 1977, Congress set a goal of cleaning up dirty air in major parks and wilderness areas. But this proved more difficult than expected. After years of delays, 37 states still have not produced the plans required to clear the air near national parks.

EDF, Earthjustice and the National Parks Conservation Association successfully sued EPA to compel action. Now the states have two years to get their plans finished and approved.

The stakes are huge. Nitrogen oxides and sulfur dioxide from automobiles, power plants and cement manufacturers stunt plant growth, acidify lakes and worsen smog. They also contribute to haze that reduces visibility in Yellowstone, Yosemite and the Great Smoky Mountains to half or less of what it should be.

“With this victory and a newly energized EPA, we're finally on track to restore clean air to America's national parks,” said our attorney Kevin Lynch.

On the move

CAN WILDLIFE ADAPT TO A WARMING WORLD?



Momtuik-Eastcott/NGS

Scientists are striving to predict how migration will change with global warming and what actions can help wildlife adapt.

You'd be hard-pressed to find two birds more unlike than the golden-cheeked warbler—delicate, private, tiny, and the greater sage-grouse—bulky, ground-dwelling and famously flamboyant in courtship. But for all their differences, the two species face an increasingly common problem: an uncertain future as global warming begins to play havoc with their habitats.

A recent Audubon study revealed that more than 300 species of North American birds already are wintering farther north, some hundreds of miles from their former range. This will create varied and unpredictable

challenges. For the sage grouse, climate change could mean a big squeeze as sagebrush habitat is lost in many areas. The warbler's troubles are even trickier, since the species breeds in only one place in the world,

the Ashe-juniper habitat in central Texas.

"Part of the coming challenge will be anticipating the warbler's response to climate change," says Environmental Defense Fund ecologist David Wolfe, who works on habitat in Texas. "We have to protect land not just where they are now but where they will be."

A RECIPE FOR WILDLIFE

Broadening a species' range greatly increases its resilience in times of stress, so Wolfe is working on buffer zones and corridors that will allow for the bird's next moves. Most of this potential habitat is on private land, and local landowners have embraced Wolfe's efforts.

"Ranchers might have once looked at having an endangered species as a liability, but we look at it as an asset," says one of those landowners, Jay Wagley, a cattle rancher who leases out land to hunters. "Habitat that's good for warblers is habitat that's good for most species."

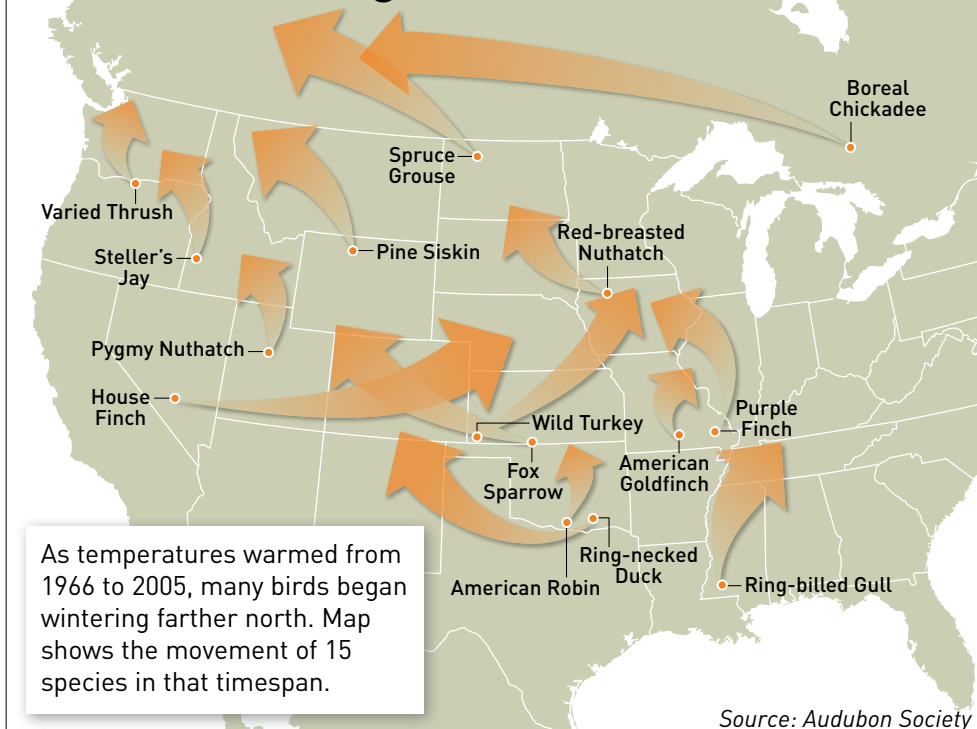
A thousand miles to the north, this thought is echoed by Margaret Solen Hinson, an Idaho sheep and cattle rancher whose land serves as a gathering spot for courtship rituals of the sage grouse.

"Private lands are the connective tissue for migrating species," she says.

That connective tissue has never been more vital. Habitat preservation, never easy, has become even more difficult with habitat a moving target.

"One of the most complicated issues we face today is how to adapt to climate change," says EDF chief scientist Dr. Ste-

Shift in winter grounds raises alarm



Carol Zuber-Mattison

ven Hamburg. “We need to create policies that help species survive and make ecosystems more resilient—not just by capping pollution but by removing other stressors.”

The new circumstances require a more active style of habitat management. It will no longer be enough to look back at an area’s historic flora and fauna, but to anticipate, through modeling, what will be there next. EDF’s Sam Pearsall, who works with estuarine ecosystems in North Carolina’s Albemarle Sound, calls this pre-storing habitat, in his case readying freshwater habitats for their brackish future.

“We need to consider that rising seas may transform a terrestrial habitat into a submerged one,” he says. “We must actively manage species and habitats or risk losing them.”

Another protective approach is to bolster existing populations of endangered species, since a healthy and diverse population is more likely to withstand the effects of climate change.

THE MARMOT’S SALAD BAR

Keeping populations healthy is complicated by the fact that phenology—nature’s clock—is being thrown out of whack. Consider the marmot. For millions of years marmots would crawl out of their dark winter dens to nibble on the green world outside. Their timing was exquisite, their internal clocks prodded by the warmth of spring.

Endangered Species Act: Science wins



The greater sage-grouse celebrates.

Animals Animals

President Obama has restored a key Endangered Species Act provision undone by the Bush administration. The decision reestablishes scientific oversight of federal agencies to protect rare species. EDF wildlife chairman Michael Bean, a leader in safeguarding endangered species law, was present at the announcement.

“The president’s action is another indication that science is once again respected in the White House,” said Bean. “The Endangered Species Act, like many of the plants and animals it protects, is on its way to recovery.”

“The salad bar was open,” says Anthony Barnosky, a paleoecologist and author of the forthcoming *Heatstroke: Nature in the Age of Global Warming*. “But now with warmer winters they wake early and stumble out into a still snow-covered world. They starve.”

Scientists helping nature cope with climate change agree: This is a problem that we created and that we must help alleviate. This will require sharpening all of the tools we are already using—creating migratory corridors and buffers by working with private land-

owners and doing what we can to diversify existing populations. At the same time, we

must improve our ability to predict where species and habitats will be moving.

This new anticipatory science, relying on predictive models and our best scientific instincts, will be vital

as we look to the future to save our planet’s past. The art of preserving nature will have to become almost as adaptable as nature itself, as we, along with the golden-cheeked warbler and greater sage-grouse, take a crash course in living in a changing world.

“Private lands are the connective tissue for migrating species.”

Idaho rancher Margaret Solen Hinson



Archer Kelly

Reducing agricultural runoff in Hawaii will help preserve ocean reefs.

Ranchers protect Hawaiian corals

It’s not often that farmers and ranchers get to protect coral reefs, but that’s exactly what is happening in Hawaii, thanks to a new conservation program EDF helped pioneer. Hawaii’s Conservation Reserve Enhancement Program (CREP) uses state and federal funds to help landowners restore streamside habitat on 15,000 acres across the six main islands.

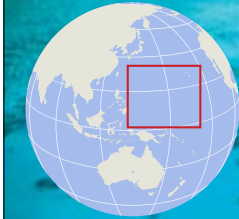
Centuries of ranching on the islands have eroded mountain slopes, causing soil to run into the ocean and smother corals. By planting native trees, restoring wetlands and installing fences to keep cattle and feral pigs out of streams, landowners can prevent erosion and create much-needed habitat for many endangered species.

EDF helped create CREP a decade ago and landowners are now protecting more than one million acres. Our consultant Terry Noto worked with government officials and landowners to shape a program specifically for the state.

“This gives landowners in Hawaii practical help to protect their incredible natural heritage,” she says.

A world apart

IN THE CENTRAL PACIFIC, AN OCEAN TREASURE FINDS PROTECTION



Paul Chesley/NGS



Brian Skerry/NGS

◀ Large predatory fish like these sharks rule at Kingman Reef, a place still largely untouched by humans.



Martin Harvey/Alamy

◀ Sometimes called the Tinkerbell of seabirds, the fairy tern catches fish by swooping down and plucking them from the sea.



Bob Cranston/Animals Animals

◀ Colorfully named convict surgeonfish keep reefs clean by feeding on algae and plankton.

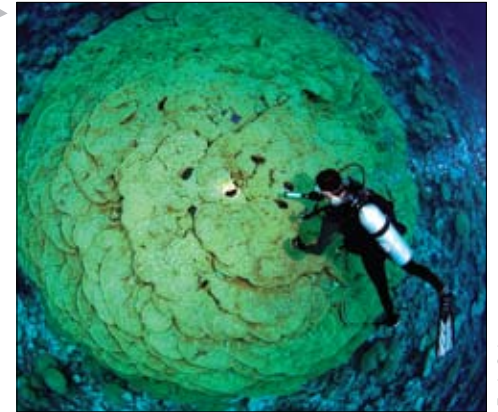
In January, President George W. Bush announced the creation of three “marine monuments”—ocean areas off-limits to fishing and mining. All told, the tracts of Central Pacific ocean, dotted with coral reefs and ribbons of spectacular tropical islands, are nearly the size of California. Huge undersea mountains, bubbling hydrothermal vents and the ocean’s deepest chasm, the Mariana Trench, remain mostly unexplored beneath the waves.

Environmental Defense Fund, together with the Marine Conservation Biology Institute, worked with the Bush administration to win strong safeguards for the new sanctuaries. We compiled findings from more than 200 leading scientists and built key political backing in support of the plan.

“These new marine monuments rank right up there with our nation’s greatest national parks,” said EDF executive director David Yarnold.

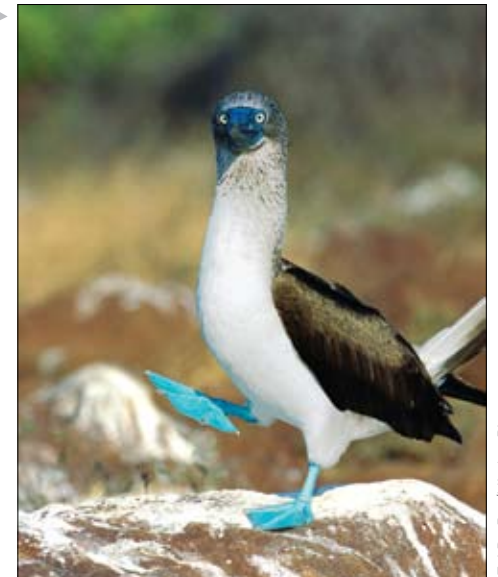
See more glorious ocean creatures in our slide show: edf.org/CoralWorldSlideshow

▶ The protected areas contain some of Earth’s most long-lived shallow-water corals. This giant coral lobe may be 500 years old.



Enric Sala

▶ From the Spanish *bobo* for stupid, this blue-footed booby is said to be clumsy on land, its least graceful environment.



Tui De Roy/Minden Pictures