

ANNUAL  
REPORT  
2013

# WHAT matters MOST

A healthy environment.  
Thriving communities.  
Solutions that work.



ENVIRONMENTAL DEFENSE FUND

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TELEPHONE: 212 505 2100 / FAX: 212 505 2375 / WWW.EDF.ORG / MEMBERS@EDF.ORG

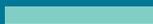
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# We are environmental optimists.

The threats to our environment are urgent, but they can be solved. EDF's 440 scientists, economists, lawyers and policy experts partner with others to find practical solutions. We've done it before, and we know how to do it again.



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## Finding the ways that work

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People often ask us how we remain hopeful in the face of growing environmental threats. It's a reasonable question. Risks to health are on the rise. Ecosystems are under assault on land and sea. Climate change is hitting home—with crippling heat and drought, savage storms and floods—while we continue to pump carbon into the atmosphere.

And yet at EDF, we remain optimistic that we can still prevent the worst effects of climate change, protect human health, restore habitats and return oceans to abundance. We're hopeful because, with our partners, we've developed a set of policy tools that have delivered extraordinary results. If we bring them to scale in time, they will do the job. We're hopeful, too, since more people are joining with us to build these solutions, and since urgency puts pressure on leaders to take action.

Finally, we're optimistic because we're making progress. A mandatory, declining cap on carbon that EDF helped design took effect this year in California, and China launched the first of seven pilot carbon-reduction programs. President Obama rolled out a plan to reduce power plant emissions. Walmart, working with EDF and others, decided to phase out a number of chemicals of concern in consumer products. We expanded partnerships with farmers to reduce pollution from nitrogen fertilizer. And we saw the commercial red snapper fishery in the Gulf of Mexico—near collapse in 2007 when EDF helped introduce a catch share management program—continue its remarkable recovery.

With great need comes great opportunity. Thank you for your steadfast support. It makes our work possible.

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A handwritten signature in black ink, appearing to read 'Carl Ferenbach'.

Carl Ferenbach, *Chairman*

A handwritten signature in black ink, appearing to read 'Fred Krupp'.

Fred Krupp, *President*

**None of the results described in this report could have happened without the support of our 750,000 members. On behalf of everyone at EDF, we thank you.**

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## PUTTING PEOPLE IN THE PICTURE

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With the urgent environmental problems we face today, one key to EDF's success is that we don't just focus on the environment. We also focus on people. Everyone deserves the opportunity to succeed and thrive, so our policies ensure that what's good for the Earth is also good for people's livelihoods. That gets a lot more people on our side.

Look at how we help farmers reduce air and water pollution. The pollution comes from excess fertilizer, and fertilizer is one of farmers' biggest expenses. So when we help them limit their fertilizer use, it benefits their bottom line—and the environment.

You can also see it in our climate and energy work. California's statewide cap on carbon emissions, which EDF co-sponsored, has helped create America's most vibrant clean energy economy.

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**EDF challenges leading businesses to help the environment. To maintain our objectivity and independence, we accept no funding from our corporate partners.**

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Beginning in 1967, EDF has been thinking differently about how to reach the environmental goals we all share. EDF was founded by a small group of scientists and an attorney. It was a partnership of science and law to protect the environment.

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“EDF realizes that we too are environmentalists. And they have helped us become better managers.” Denny Friest, *Farmer, Radcliffe, Iowa*

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In the 1970s, EDF became the first environmental group to hire Ph.D. economists. We found that if you design policies that make environmental protection pay—and then do the hard work of putting those solutions in place—people will invent all kinds of ways to make it happen.

As we enter 2014, the global environment faces grave threats. But at EDF, we remain optimists, because we've seen how innovative thinking, based on sound science and economics, can protect air, water, wildlife habitat and human health.

There's no reason people can't be healthy *and* prosperous. With the right solutions, people and the environment thrive together.

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## ENVIRONMENTAL DEFENSE ACTION FUND: REACHING ACROSS THE AISLE ON CAPITOL HILL

“No environmental legislation has ever been passed without bipartisan support, so it’s critical to depolarize environmental issues,” says Environmental Defense Action Fund president Elizabeth Thompson. “That’s why we engage with the political system in a nonpartisan way.”

EDF has long been an influential voice in Washington. When the need to represent environmental issues in Congress began to exceed the \$1 million annual cap on our lobbying costs set by tax law, we created the Environmental Defense Action Fund, a sister group that is free of such limits because it accepts only nondeductible donations.

Gifts to the Action Fund allow us to target key legislators and mount ad campaigns that identify legislation by name. More than 500,000 of our members have signed up to contact their representatives in Congress before important votes.

### SOME CURRENT ENVIRONMENTAL DEFENSE ACTION FUND ACTIVITIES



*Defending the Clean Air Act against attack in Congress*



*Sustaining Congressional support for Gulf Coast restoration*



*Strengthening reforms to the nation’s archaic chemicals law*



*Fighting opponents of effective limits on overfishing*

One example of bipartisan cooperation was passage of the RESTORE Act in 2012, directing large portions of BP’s oil spill fines to Gulf Coast restoration. Businesspeople, scientists and others helped us persuade Congress, and the Action Fund paid for an ad blitz to sway wavering lawmakers. RESTORE passed 373–52 in the House and 74–19 in the Senate. This year, the first funds—\$1.25 billion—flowed to the largest ecosystem restoration in U.S. history.

To help deliver EDF’s message, we have assembled a network of influential supporters, our Strategic Partners. These allies, including local and national civic and religious leaders, economists and CEOs, contact legislators personally and explain our solutions. Calls and emails from Action Fund members turn up the pressure.

“We can’t match the lobbyists dollar for dollar,” says Thompson, “but lawmakers listen to their supporters, and many supporters in both parties care about the environment. So what we ask them to do is to speak up about it. And we help amplify their voices.”



“Changing the politics of environmental protection won’t happen overnight, but cultivating new allies on both sides of the aisle is a critical first step.”

**Elizabeth Thompson**, *President Environmental Defense Action Fund*

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## FINANCIAL COMMENTARY

Environmental Defense Fund completed fiscal 2013 on a sound financial footing, with a record level of program expenditures from continued strong growth in support. Total program and supporting services expenses were \$120.5 million, a 14% increase over the previous year.

Unrestricted support and revenue of \$120.8 million was used to pay for current operations during fiscal 2013. Contributions and membership, including a portion of net assets released from restrictions, provided 54% of this amount, while foundation grants, also including a portion of net assets released from restrictions, provided 38%.

Net restricted operating support and revenue of \$32.8 million in fiscal 2013 reflects contributions from multiyear gifts and pledges for use in future years. These gifts play an increasingly important role in enabling us to plan our work, most of which involves multiyear efforts.

We spent a total of \$120.5 million in fiscal 2013. Program services accounted for 84%, or \$101.2 million, a new record. Development represented 7% of expenditures, while management and administration was 6%. Membership and new member acquisition totaled 3%.

Thanks mainly to gifts designated for future years, total net assets grew \$35.5 million to \$192.1 million during fiscal 2013.

We report our results using Generally Accepted Accounting Principles (GAAP), which require us to record income based on the year funds are raised, not in the year designated for use, among other requirements.

The Unrestricted column in the financial statement on the following pages parallels our operating budget. To build the budget, we look first at funds available from multiyear gifts, then at a forecast of new fundraising and prospective spending. As the year unfolds, we monitor fundraising and adjust spending to maintain a balanced budget.

We are thankful for the support of all our members and donors this past year. Your continued generosity provides the resources needed to achieve our ambitious program goals and respond to urgent challenges for the environment.

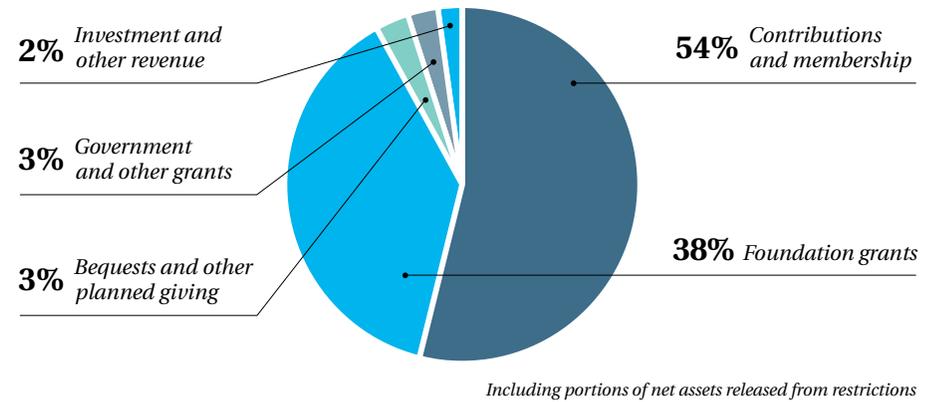
**Peter Accinno**, CFO, Treasurer, VP Finance and Administration

## TOTAL PROGRAM AND SUPPORTING SERVICES EXPENSES

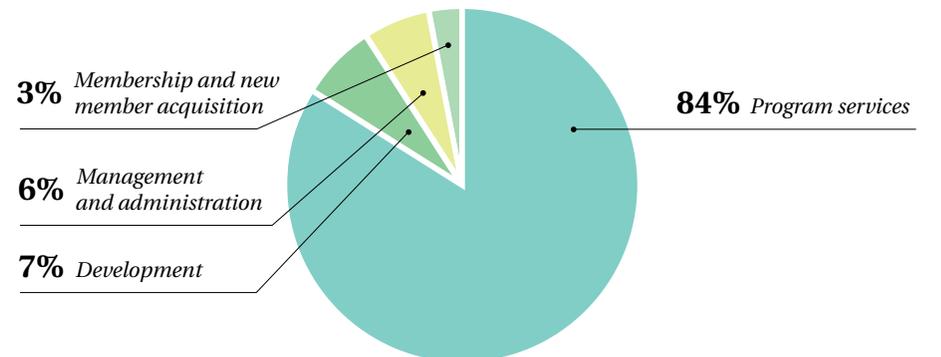
2011	2012	2013
93.1	105.4	120.5

*In millions of dollars*

## SOURCES OF SUPPORT FOR FISCAL 2013 OPERATIONS



## EXPENSES



## STATEMENT OF ACTIVITIES

YEAR ENDED SEPTEMBER 30	UNRESTRICTED	RESTRICTED	TOTAL 2013	TOTAL 2012
<b>OPERATING SUPPORT AND REVENUE</b>				
<b>Support:</b>				
> Contributions and membership	\$13,600,433	\$39,650,932	\$53,251,365	\$77,450,285
> Foundation grants	241,150	89,876,952	90,118,102	30,106,813
> Government and other grants	1,293,446	2,641,093	3,934,539	3,393,377
> Bequests and other planned giving	3,051,424	174,968	3,226,392	1,949,112
<b>Total support</b>	<b>18,186,453</b>	<b>132,343,945</b>	<b>150,530,398</b>	<b>112,899,587</b>
<b>Revenue:</b>				
> Investment income allocated for operations	2,035,900	247,494	2,283,394	2,226,618
> Fees, royalties and other income	736,037	–	736,037	1,351,641
<b>Total revenue</b>	<b>2,771,937</b>	<b>247,494</b>	<b>3,019,431</b>	<b>3,578,259</b>
Net assets released from restrictions	99,820,590	(99,820,590)	–	–
<b>Total support and revenue</b>	<b>120,778,980</b>	<b>32,770,849</b>	<b>153,549,829</b>	<b>116,477,846</b>
<b>EXPENSES</b>				
<b>Program services:</b>				
> Climate & Energy	47,094,107	–	47,094,107	37,215,577
> Oceans	21,070,263	–	21,070,263	23,048,730
> Ecosystems	18,981,854	–	18,981,854	16,276,788
> Health	7,266,384	–	7,266,384	5,161,331
> Education	4,880,117	–	4,880,117	3,825,033
> Membership activities	1,935,892	–	1,935,892	681,601
<b>Total program services</b>	<b>101,228,617</b>	<b>–</b>	<b>101,228,617</b>	<b>86,209,060</b>
<b>Supporting services:</b>				
> Management and administration	7,419,937	–	7,419,937	7,244,031
> New member acquisition	375,856	–	375,856	616,036
<b>Fundraising:</b>				
> Membership	2,670,468	–	2,670,468	2,396,403
> Development	8,802,754	–	8,802,754	8,935,928
<b>Total supporting services</b>	<b>19,269,015</b>	<b>–</b>	<b>19,269,015</b>	<b>19,192,398</b>
<b>Total operating expenses</b>	<b>120,497,632</b>	<b>–</b>	<b>120,497,632</b>	<b>105,401,458</b>
Change in net assets from operations	281,348	32,770,849	33,052,197	11,076,388
Other expenses, net of contributions and other income	70,892	21,609	92,501	(521,828)
Investment results, net of allocation to operations	1,798,348	604,245	2,402,593	3,900,889
<b>Change in net assets</b>	<b>2,150,588</b>	<b>33,396,703</b>	<b>35,547,291</b>	<b>14,455,449</b>
Net assets, beginning of year	42,319,764	114,264,743	156,584,507	142,129,058
<b>Net assets, end of year</b>	<b>\$44,470,352</b>	<b>\$147,661,446</b>	<b>\$192,131,798</b>	<b>\$156,584,507</b>

This statement of activities represents the consolidated activities of Environmental Defense Fund, Incorporated, Environmental Defense Action Fund and California Fisheries Fund, Inc.

Copies of the complete audited financial statements are available upon request or at [edf.org/audit](http://edf.org/audit).

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## WHERE IT ALL BEGAN

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“When ten of us started EDF in 1967, we were out to protect ospreys on Long Island from DDT. We really had no idea that we would be able to develop the organization that we have today.”

**Art Cooley** (far left), with co-founders Charles Wurster (center) and the late Dennis Puleston

CLIMATE  
+  
ENERGY

# We can power the world—and avert the worst impacts of climate change.

**New carbon-cutting programs in China and California. U.S. national action to slash carbon pollution from the power and transportation sectors. And an ambitious new strategy for accelerating clean energy. All this offers hope that global warming pollution can be limited before it is too late.**



## U.S. energy use



**Goal:** Hasten the transition to clean, low-carbon energy in the United States.

**Why:** The U.S. is the world's largest economy and the second-largest emitter of greenhouse gases. The clean energy economy will drive a new era of prosperity.

**Contribution to global warming:** 11%\*

**Our objectives by 2015:**

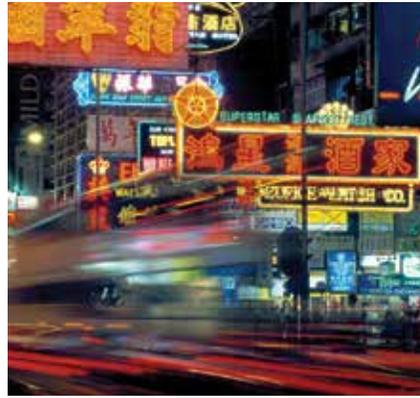
- 1/ California power plants and other emitters cut emissions by the required amount or more to meet the state's declining limits.
- 2/ EPA finalizes carbon pollution limits for power plants and large diesel trucks.
- 3/ Secure changes in the rules that govern the electric grid to lock in a substantial cut in carbon pollution by 2018.

**EDF leadership:**

Jim Marston, *VP U.S. Climate & Energy*  
 Vickie Patton, *General Counsel*  
 Jeremy Symons, *Senior Director, Climate Policy*

\*100-year time horizon

## China energy use



**Goal:** Hasten the transition to clean, low-carbon energy in China.

**Why:** China is the world's largest emitter of greenhouse gases. The commitments China makes in its next five-year plan will determine the country's impact on global warming for decades to come.

**Contribution to global warming:** 18%\*

**Our objectives by 2015:**

- 1/ China's seven pilot carbon reduction programs achieve their goals.
- 2/ China is on track to increase renewable energy to 15% of total electricity generation and to cap coal consumption by 2015.
- 3/ Training of more than 20,000 environmental enforcement officers in all 33 of China's provinces is completed.

**EDF leadership:**

Daniel Dudek, *VP*  
 Zhang Jianyu, *Managing Director*

## Agriculture & deforestation



**Goal:** Reduce emissions from agriculture and deforestation.

**Why:** Protecting rainforests offers a huge, immediate payoff. Better farming practices can boost food security and resilience while curbing carbon emissions.

**Contribution to global warming:** 22%\*

**Our objectives by 2015:**

- 1/ China is on pace to enlist 20 million families in low-carbon farming by 2016.
- 2/ Brazil sustains progress toward its goal of reducing deforestation rates by 80%.
- 3/ Acre, in Brazil, establishes a program to produce high-quality forest carbon credits.
- 4/ California broadens its carbon market to authorize the use of such credits.

**EDF leadership:**

Nathaniel Keohane, *VP International Climate*  
 Stephan Schwartzman, *Director*  
 Richie Ahuja, *Regional Director*

## Climate accelerants



**Goal:** Cut emissions of climate accelerants.

**Why:** Short-lived but potent greenhouse gases—"climate accelerants" such as methane and some fluorinated gases—have an outsized impact on global warming.

**Contribution to global warming:** 16%\*  
 (but up to 38% on 20-year horizon)

**Our objectives by 2015:**

- 1/ Studies quantify methane leakage in the U.S. natural gas supply chain.
- 2/ Major reductions in methane emissions from the supply chain are secured, and are on track to be reduced to 1% or less.
- 3/ California's carbon market incorporates methane reductions from rice farming.
- 4/ EPA tightens limits on methane from landfills and oil and gas operations.

**EDF leadership:**

Steve Hamburg, *Chief Scientist*  
 Mark Brownstein, *Associate VP Energy*

## EDF HELPS USHER IN THE LOW-CARBON ERA

Cleta Felzien does not consider herself part of the new energy revolution. But on her ranch in Colorado, in addition to cows, a well-used tractor and a faded pink and white house, seven brand-new GE wind turbines spin lazily in the High Plains breeze.

“That wind is putting my son through college,” says Felzien.

Buying Felzien’s wind power is Minneapolis-based Xcel Energy, one of the utilities EDF is helping guide into the new energy economy. Since 2005, Xcel has reduced its carbon emissions by 18%.

America’s transition to clean energy is accelerating—more than half of new U.S. power capacity last year came from wind and solar. That trend will continue, thanks to the Climate Action Plan announced by President Obama in 2013, an ambitious effort to establish U.S. leadership in the fight against global warming. The plan’s centerpiece: tough standards to slash carbon dioxide emissions from America’s new and existing power plants.

When implemented, the standards will represent a major victory for EDF and its allies in the struggle to slow global warming. This battle isn’t over, but 2013 will be remembered as the year when the United States got serious about its largest source of carbon pollution—600 coal-fired power plants, 40% of the problem.

# 84

different hazardous air pollutants emitted by coal-fired power plants

# 150

proposed coal-fired plants canceled nationwide



**The U.S. has never limited carbon pollution from power plants. That’s finally changing.**



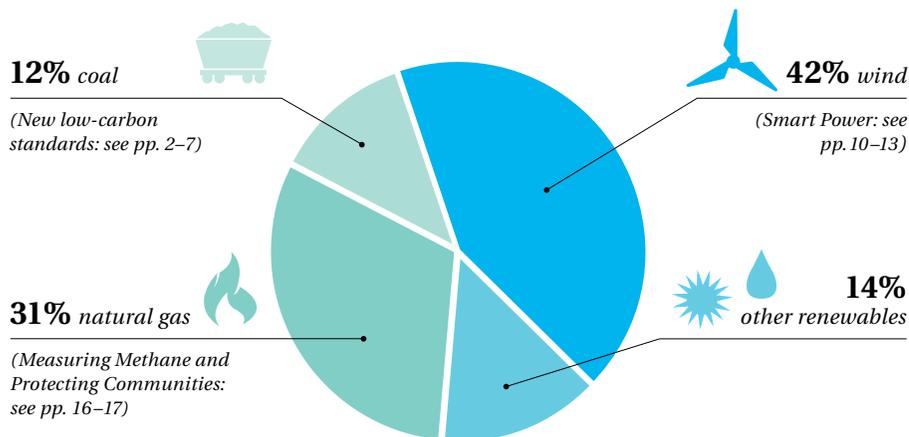
Dealing with this massive pollution took a decade of effort by EDF and others. We played a key role in Supreme Court cases that affirmed EPA's authority to regulate greenhouse gas emissions.

When EPA missed a deadline in April 2013 to release its new power plant standards, EDF threatened legal action. “We never gave up,” says EDF’s general counsel Vickie Patton.

Once the standards were proposed, the coal industry petitioned the U.S. Supreme Court to strip EPA of its authority over carbon pollution. EDF sprang into action. Joining 17 states, we urged the Court to deny the petitions. And our Action Fund ran TV ads in eight states, mobilizing citizens to shore up support in Congress.

The proposed standards remain on track, but a well-funded coal lobby is trying to strong-arm Congress to cut funding for EPA. The best arguments against that lobby are the hard-headed calculations of the energy industry itself. Our partnership with Xcel

## NEW U.S. POWER CAPACITY IN 2012



Note: Numbers do not add to 100 due to rounding.



“I love the turbines. You can’t drought them out and you can’t hail them out.” *Cleta Felzien, Colorado rancher*

has helped transform states into test beds for the low-carbon future. When the Obama administration wavered, we made sure these business voices were heard.

“EDF and power companies are working together to show that commonsense progress is possible,” says Patton, who led our legal team in defending the standards. “We demonstrated that even in fast-growing states, you can provide reliable, low-cost energy and make dramatic cuts in global warming pollution.”

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**Ben Fowke / CEO Xcel Energy**


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**“Our customers demand clean energy but want it at an affordable price.”**

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Denver’s Cherokee power plant was once the area’s largest source of carbon pollution. Today, the coal-fired plant is being replaced with wind energy and natural gas, and the city’s notorious “brown cloud” is largely history.

For a decade, EDF worked with Cherokee’s owner, Xcel Energy, to anticipate pollution regulations, retire aging coal plants, and transition to modern clean energy resources. **“Our partnership led to breakthrough solutions for the environment,”** says Xcel CEO Ben Fowke.

Today, Xcel is the nation’s leading utility for wind power. The company estimates its clean energy projects will ultimately save ratepayers \$800 million in fuel costs. **“Our customers demand clean energy but want it at an affordable price,”** says Fowke. **“With partners such as EDF, we found a way to deliver it.”**

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**ENVIRONMENTAL DEFENSE ACTION FUND: A VOICE FOR CLIMATE ACTION, HEARD IN THE RIGHT PLACES**


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Early in 2013, it wasn’t clear that the Obama administration would act to clean up power plants. **“We were up against well-funded interest groups doing all they could to block this,”** says Carol Andress, our climate legislative director. **“But direct advocacy with policy makers helped cut through those arguments.”**

**The Environmental Defense Action Fund gave legislators on both sides of the aisle the information they needed to support strong power plant standards. The administration moved forward to propose standards, and while the coal lobby is still fighting, the Action Fund won’t rest until tough standards are made final.**

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**“We are making sure power plant pollution is a constant issue in front of decision makers.”** Carol Andress, *Climate Legislative Director*

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## CALIFORNIA'S BOLD EXPERIMENT PUTS A PRICE ON CARBON

A year ago, California kicked off America's most ambitious climate solution—a cap-and-trade program covering 350 of the state's largest greenhouse gas polluters.

Previously, power plants and other high-polluting facilities in the state could dump carbon dioxide into the atmosphere for free. Now they must buy allowances, sold periodically at auction, for whatever amount of carbon they emit. The idea is to drive down carbon emissions by making it more profitable not to pollute.

After four auctions in the first 12 months, all signs point to a robust carbon-reduction market with long-term viability. Prices indicate companies can cut pollution at a reasonable cost.

The auctions also raised almost \$400 million to invest in projects that cut climate pollution and stimulate the clean energy economy.

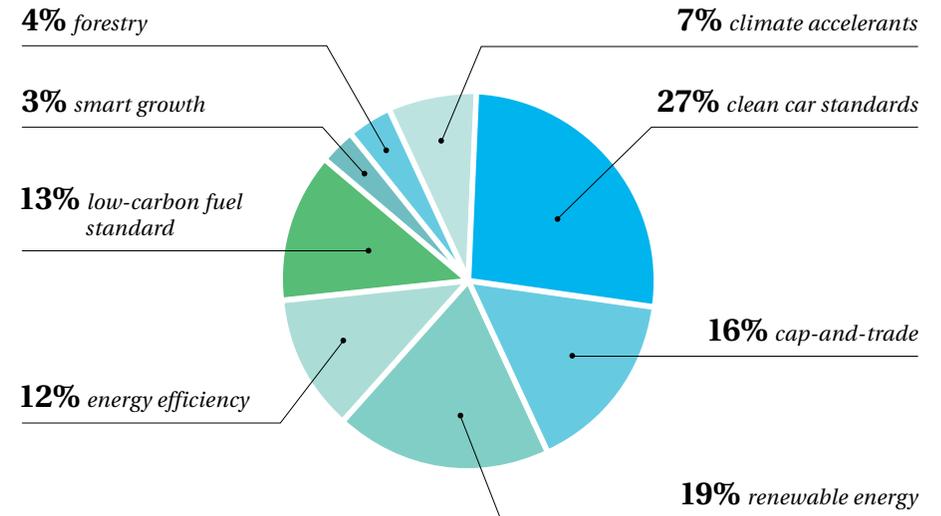
It all started with the state's landmark bipartisan 2006 climate bill, the Global Warming Solutions Act, which EDF co-sponsored and defended in court and at the polls. The law requires the state to reduce climate pollution to 1990 levels by 2020.

In addition to launching the world's largest economy-wide cap-and-trade program, California has set rigorous standards for cleaner cars, renewable energy and low-carbon fuels, sparking

**"As the world's eighth largest economy, California is a model for national—and global—action on climate change."** Jim Marston, VP U.S.

*Climate & Energy*

## WHERE CALIFORNIA'S EMISSIONS REDUCTIONS ARE COMING FROM



Source: Emissions reductions from Scoping Plan Measures; 2020 GHG Emissions Forecast.  
Note: Numbers do not add to 100 due to rounding.

innovations in the way utilities generate electricity, automakers design cars and refineries make fuel. For example, the Low Carbon Fuel Standard (LCFS) is driving demand for biodiesel. "Propel relocated to California to benefit from policies like LCFS," says Matt Horton, CEO of Propel Fuels, a biodiesel company.

All this translates into jobs. Clean-tech employment in California has grown four times faster than all jobs in the state. And California has cut carbon emissions by nearly 20% in just five years.

The Golden State's new carbon market has helped set the stage for cap-and-trade programs globally, including the linkage of California's and Quebec's carbon markets in early 2014, and a partnership with China's emerging market.

## FINDING SMARTER WAYS TO POWER OUR WORLD

Imagine a world where homes not only run on clean electricity but also generate, store and sell it.

A world where power companies get paid to conserve and manage electricity, not just produce it. And where the electric grid balances demand with supply to use more renewable energy. We call this vision Smart Power—it's the key to decarbonizing energy.

Electric utilities are at a crossroads. As they replace old, dirty power plants, they can either build more of the same or turn toward low-carbon energy. EDF's Smart Power program helps put the right incentives in place so technology can transform the energy sector as dramatically as it transformed communications.

In nine states that make up nearly half the U.S. energy market, we're working to strengthen clean energy requirements, remove obstacles to investment and realign business models. In Texas, we're part of Pecan Street, a neighborhood "lab" of residential homes that generate, store and sell power. In Illinois, we helped persuade the Commerce Commission to order electric utilities to reduce carbon. And after the devastation of Superstorm Sandy, we worked with the governors of New York and New Jersey to shape new ways to rebuild a more resilient energy infrastructure.

We won't stop until the United States has a modernized energy system. After all, our power grid hasn't been updated since Thomas Edison invented it. It's time for Smart Power.

## SMART POWER: A TRIPLE WIN



### 01 PEOPLE

*Savings, reliability and control*

- > Lower electric bills
- > More reliable power during extreme weather events
- > Control over personal energy use



### 02 ENVIRONMENT

*Less pollution, better health*

- > More renewable energy
- > Less reliance on fossil fuel power plants
- > Improved public health



### 03 ECONOMY

*Energy efficiency and jobs*

- > More efficient use of electricity
- > Fewer blackouts
- > Economic development and good-paying jobs
- > Global competitiveness

"EDF is clearing away the obsolete rules that have stood in the way of a clean energy future." **Julian H. Robertson, Jr.**, *Founder & Chairman, Tiger Management, LLC; EDF Trustee*

## EDF CLIMATE CORPS: A NETWORK OF YOUNG ENERGY LEADERS



EDF Climate Corps trains graduate school students to find energy savings, then embeds them at businesses and public institutions for a summer. Since the program's inception in 2008, Climate Corps fellows have identified nearly \$1.3 billion in energy savings—enough to power 180,000 homes annually over the lives of the projects. Our 400 alumni are rapidly becoming the next generation of green leaders, with 80% of them now working in sustainability at leading companies. Many are hired by their host firms.

Often, the energy fixes they find are surprisingly simple. One fellow at a supermarket chain wondered why some freezer doors had heaters while others had energy efficient anti-fog film. He found an anti-fog product that could be retrofitted to existing doors. That could cut CO<sub>2</sub> emissions by 26,000 tons a year.

While EDF Climate Corps fellows find immediate energy savings, they also focus on goal setting, financing and data management. The goal? To make energy efficiency a corporation-wide activity.

## AS GLACIERS RECEDE, A CLIMATE ACTIVIST IS BORN



**“For me, sustainability is more than a field, it’s how you approach everything.”** Nicolas Gordon

A native of Chile, Nicolas Gordon became concerned about climate change while working as a trekking guide in Patagonia and observing how glaciers shrank “on a weekly basis.” As a 2013 EDF Climate Corps fellow, Gordon worked at AIG in New York City, where his recommendations, which included adding sun window films to reduce the air-conditioning load, could save \$500,000 in operating costs annually. “For me, sustainability is more than a field, it’s how you approach everything,” says Gordon.

**“If you are unsure how to jump-start your company’s energy efficiency journey, EDF Climate Corps provides the best path forward that I have found.”** Scott Tew, Director, Center for Energy Efficiency & Sustainability, Ingersoll Rand

## EDF AND LABOR JOIN FORCES

To stay competitive in the global economy and keep workers engaged, companies are taking a second look at how they use—and sometimes waste—energy.

EDF has teamed up with the labor union IUE-CWA to conduct energy “treasure hunts” at several manufacturing plants.

**“What’s good for the environment is good for labor—and good for company profits,”** says EDF project manager Brendan FitzSimons. In the future, the union plans to expand the treasure hunts and conduct them at many other workplaces. A key goal: making energy efficiency part of the culture at these plants, not something to think about once or twice a year.

**“It’s one thing to say, we need a greener planet. But when you can go to the plant manager and say, ‘Here’s your greener planet, and here’s \$20,000 too,’ it’s a little more interesting.”** Mark Phair, *Facility Manager,*

*Siemens engine plant, Cincinnati, OH*



## Bill and Susan Oberndorf

A commitment to safer natural gas drilling



**“If we don’t get the environmental piece of it right, it could have all kinds of negative consequences.”**

Bill Oberndorf

San Franciscans Bill and Susan Oberndorf made a generous donation in 2012 to support EDF’s work on natural gas. **It was their first-ever donation to an environmental group.**

“What drew us to the work is that natural gas can be a game changer for the country in many, many ways,” says Bill.

“But if we don’t get the environmental piece of it right, it could have all kinds of negative consequences. We wanted to invest in helping to get it right.”

Susan adds, “As we did our research on who was really doing good work in this area, EDF kept popping up as the name that was trusted and respected, both in the environmental community and in the business community.”

To the Oberndorfs, it’s critical that America be able to secure the economic and low-carbon potential of its abundant shale gas reserves.

“If we’re able to do that,” says Bill, “we will have achieved a great win-win.”

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## EDF TAKES THE MEASURE OF METHANE



The number of shale gas wells in the United States has tripled since 2005, yet no one knows how much gas is leaking from wells, pipelines, storage and distribution facilities.

Determining leakage rates is critical because natural gas is mostly methane—a greenhouse gas many times more potent than carbon dioxide. If too much gas is escaping, it would erase over the medium term the climate advantage natural gas has over other fossil fuels, which emit more carbon dioxide when combusted.

In 2012, EDF—in collaboration with 90 academic researchers and companies—launched a series of 16 research projects to measure methane emissions along the gas supply chain. Researchers, led by the University of Texas, published in 2013 the first data on methane emissions from hydraulically fractured shale gas wells.

Our goal is to ensure that industry minimizes methane leakage from the production, transportation and use of natural gas.

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## PROTECTING COMMUNITIES AND PUBLIC HEALTH FROM UNACCEPTABLE NATURAL GAS IMPACTS



EDF is fighting to end irresponsible natural gas development through strong regulation and industry partnerships. Among 2013's successes:

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**PENNSYLVANIA:** We helped create the Center for Sustainable Shale Development, establishing 15 leading practices for shale gas development. The program will include third-party audit, much as Green Building Council oversees LEED standards for buildings. *The Washington Post* called the Center “a heartening breakthrough in the war over fracking.”

**TEXAS:** The state thoroughly overhauled its outdated well construction requirements. The improvements included many ideas contained in a model regulatory framework developed by EDF and Southwestern Energy. The new regulations will increase protections for groundwater and serve as a model for other states. Now we're helping Texas focus on the issue of wastewater disposal.

**WYOMING:** We partnered with local environmental groups to successfully advocate new measures to reduce air pollution. We also helped Governor Matt Mead (R) draft sound rules for protecting groundwater.

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“EDF’s knowledge of oil and gas issues is a major asset to advancing our efforts to improve protections for Pennsylvania citizens.” John J. Walliser, Vice President, Pennsylvania Environmental Council

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## EDF IN CHINA: ACCELERATING THE SHIFT FROM COAL TO CLEAN ENERGY

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China burns over half the world's coal. And though coal has fueled prosperity, it is also the primary reason that China tops the list of the world's worst carbon polluters. In 2013, with EDF's help, China launched the first of seven carbon trading pilot programs designed to clear the air by improving energy efficiency and accelerating the shift to cleaner energy sources such as wind. The pilots will eventually cover 250 million people in Shenzhen, Beijing, Chongqing, Shanghai, Tianjin, and the provinces of Guangdong and Hubei.

EDF began a formal collaboration with Shenzhen last November, providing technical support and training to officials designing the first pilot. The project will limit emissions from 635 companies responsible for about 40% of the city's carbon pollution. Companies able to reduce their emissions below their limit can sell unused permits to companies unable to meet their targets—creating a financial incentive to reduce emissions while ensuring strong environmental results.

EDF also helped broker an agreement between Shenzhen and California, the first U.S. state to develop its own state-of-the-art emissions trading system. This cooperation opens the door to work on a range of low-carbon strategies, from carbon trading to electric vehicles.

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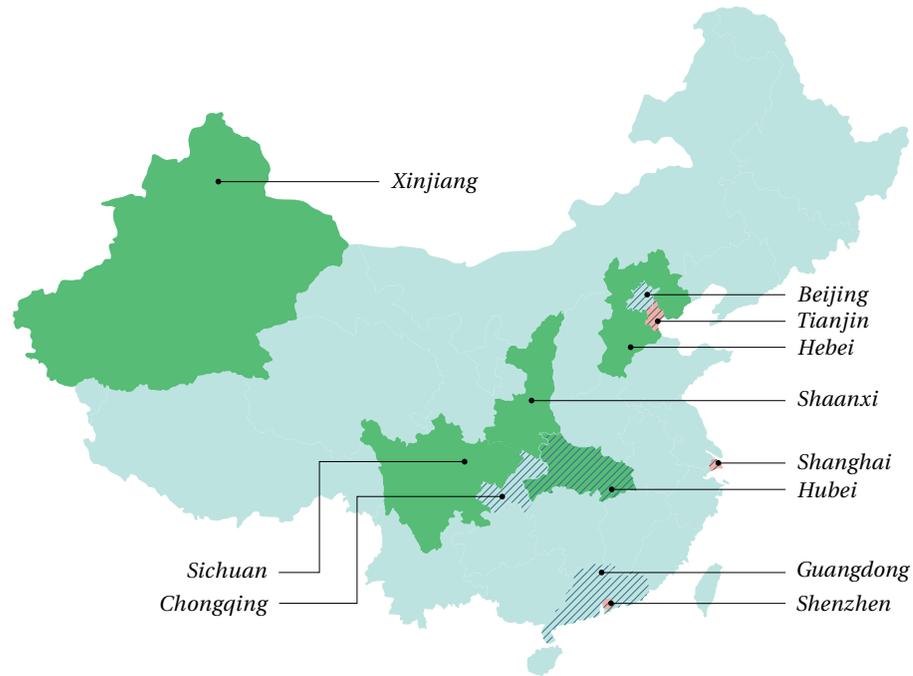
**“We cannot stabilize global climate without a targeted and rigorous campaign to curb carbon pollution in China. The seven new pilots are the boldest experiment yet in that direction.” Daniel Dudek, EDF Vice President**

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## A LOOK AT EDF'S CHINA PROGRAM

This work is urgent. The future of China and the planet are firmly linked.



	<b>CARBON TRADING</b>	EDF is providing technical assistance and training to all seven carbon trading pilots.
	<b>LOW-CARBON FARMING</b>	Farmers in our low-carbon farming pilots are rewarded for adopting climate-friendly agricultural practices that reduce carbon and increase efficiency.
	<b>GREEN SUPPLY CHAIN</b>	Our green supply chain pilots give factories an incentive to slash energy use: if they want to win contracts to supply big purchasers, they must meet environmental requirements.

### IMPROVING ENVIRONMENTAL COMPLIANCE:

15,000



environmental enforcement officers from all 33 provinces trained by EDF

## Children's Investment Fund Foundation

Investing in the next generation



**“Carbon pricing is a must-have. It’s the most cost-effective signal to investors.”**

**Kate Hampton of CIFF**  
*(pictured with EDF Vice President Dr. Daniel Dudek)*

The London-based Children's Investment Fund Foundation (CIFF) is dedicated to improving the lives of impoverished children in developing countries. Since climate change disproportionately affects these children, the foundation is helping reduce carbon emissions.

“The decisions taken in China over the next five years are perhaps the most important in the world on this issue,” says CIFF's climate executive director Kate Hampton. “Carbon pricing is a must-have. It's the most cost-effective signal to investors to fund low-carbon activities.”

That's one reason CIFF decided to partner with EDF to develop carbon trading pilots in China. “EDF has a strong reputation in emissions trading, through its work on sulfur dioxide markets in the United States and China. You can't replicate that starting from scratch,” says Hampton.

“We seek the right combination of experience in an organization. It must be both nimble and focused so it can be efficient and relentless in pursuit of a goal. We're very happy to have EDF as our partner.”

## GREEN AGRICULTURE FOR THE DEVELOPING WORLD



More than 500 million subsistence farmers can play an important role in reducing climate pollution. EDF's low-carbon farming and rural development projects have already reached 700,000 people in China, India and Vietnam. The pilots use economic incentives to reward farmers when they adopt climate-friendly agricultural practices such as the precise application of fertilizer.

In China and India, EDF is helping provide rural families with biodigesters that convert manure into biogas for cooking. This reduces methane emissions and improves the health of thousands of families by eliminating smoky indoor fires.

In South India, EDF scientists are training local technicians to gather field data on greenhouse gas emissions from crops. With our partners, we have set up five labs to analyze gas samples and measure the effectiveness of climate-friendly farming so that poor farmers can be rewarded in the voluntary carbon market.

In a deal we brokered, India's largest airline, IndiGo, allows travelers to partially offset their carbon footprint from flying by buying emissions reductions generated by our farmers.

## A PRIORITY: RAINFOREST PRESERVATION

Around the world, more than one billion people rely on rainforests for their livelihoods. But rainforest destruction accounts for about 15% of global greenhouse gas emissions. EDF is working in Brazil and Mexico to make standing tropical forests—and the carbon they contain—more valuable than logging. Our strategy would reward indigenous people for protecting their forest homes, and allow countries that reduce deforestation to sell greenhouse gas reductions in the carbon market.

EDF brokered a deal in which California, the Brazilian state of Acre and the Mexican state of Chiapas agreed to develop guidelines for allowing forest preservation credits into California's new burgeoning carbon market.

“Opening California's carbon market would be a powerful signal to rainforest nations that the world values the climate and ecosystem services they provide.” Dr. Stephan Schwartzman, *EDF Tropical Forest Director*



## The Hon. George P. Shultz / Former U.S. Secretary of State

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“EDF does constructive, thoughtful, hard work, and that gains respect—and results.”

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George Shultz has served two presidents in four cabinet-level positions—only the second man in American history to have done so.

“The world responds when the United States leads,” says Shultz. “The principal country we need to work with today is China. Climate change is a big problem for them and they’re ready to work on it.”

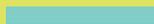
Shultz advises EDF on a range of issues, including global warming and natural gas, where his decades of experience have proved invaluable in bringing diverse groups together. “EDF does constructive, thoughtful, hard work, and that gains respect—and results,” he says.

At 92, Shultz is in step with the times: he drives an electric car and charges it with solar panels on his roof.

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# We can get toxic chemicals out of our cupboards.

**Ever worry about what's in that air freshener you just sprayed in the kitchen? What about your baby's shampoo? Thanks to a new policy on chemicals adopted by the world's largest retailer, consumers are a step closer to having safer, healthier products in their homes.**



## Toxic chemicals



**Goal:** Reform U.S. toxic chemicals policy.

**Why:** A stronger law is needed to replace the nation's obsolete chemicals law, which has not been updated in 37 years.

**Our objectives by 2015:**

1 / We build and help lead a coalition of health, environmental, labor, business, consumer and environmental justice groups to achieve fundamental reform of U.S. chemicals policies.

2 / New legislation is enacted that significantly improves the Toxic Substances Control Act and ensures that only fully tested and safe chemicals are allowed to enter and remain on the market.

**EDF leadership:**

Sarah Vogel, *Health Program Director*  
Richard Denison, *Senior Scientist*

## Consumer products



**Goal:** Accelerate safer product innovation through corporate partnerships.

**Why:** Major consumer-product retailers can leverage the supply chain to speed the introduction of safer product ingredients.

**Our objectives by 2015:**

1 / Reduction targets are set for key chemicals of concern in major Walmart product categories, and guidance is provided to suppliers on principles for chemical substitutions.

2 / The chemical screening tool EDF developed for the Walmart supply chain is adopted for use in other product categories.

**EDF leadership:**

Tom Murray, *VP Corporate Partnerships*  
Elizabeth Sturcken, *Managing Director*  
Michelle Harvey, *Senior Manager*

## Power plant pollution



**Goal:** Cut air pollution from electric power generating plants.

**Why:** Today tens of millions of Americans live in areas where unhealthy particulate pollution from power plants exceeds the federal limits.

**Our objectives by 2015:**

Sulfur dioxide and oxides of nitrogen pollution from power plants is cut by 75% from 2005 levels, and mercury pollution is reduced substantially.

**EDF leadership:**

Vickie Patton, *General Counsel*

## Transportation pollution



**Goal:** Reduce pollution from transportation.

**Why:** Children who live near high-traffic roads face a higher risk of asthma, cancer and heart disease. Meanwhile, pollution from ships and trucks disproportionately affects those who live near U.S. ports.

**Our objectives by 2015:**

1 / National limits are secured on dangerous smog- and soot-forming pollutants from new cars.

2 / Substantial reductions of diesel emissions from marine sources and port-related transportation are achieved at all continental U.S. ports.

**EDF leadership:**

Elena Craft, *Health Scientist*  
Mandy Warner, *Climate & Air Policy Specialist*

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## TAKING THE LEAD ON SAFER CHEMICALS

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**Because of its extraordinary size and purchasing power, Walmart has a unique capacity to influence its suppliers. Its decisions have industry-wide implications.**

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For 127 million Americans, a trip to Walmart is a weekly household ritual. In 2013, the retailer unveiled a new policy, which EDF helped develop, to begin phasing out some potentially harmful ingredients found in everyday products such as shampoo, baby lotion, cosmetics and air fresheners, and replace them with safer ingredients. It was the first major retailer to do so.

“Consumers are demanding safer products,” says Dr. Sarah Vogel, EDF’s Health program director. [“Scientific research points to serious health risks of chemical exposures, including cancer, diabetes and infertility.”](#)

In 2007, EDF opened an office in Bentonville, Ark., near Walmart’s corporate headquarters, to help the retailer lessen its environmental footprint. “The very first conversation we had was about chemicals,” says Michelle Harvey, our senior manager there.

Two years later, Walmart began using a software screening program, developed with help from EDF, to assess the chemical ingredients of personal care products, household cleaners and other formulated products. The software, called GreenWERCS, revealed disturbing news: Almost 40% of formulated products on Walmart shelves contain chemicals that may pose health risks.

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Learning of these findings, Walmart took action. “Our goal is to sell products that sustain people and the environment,” says Andrea Thomas, Walmart’s senior VP of sustainability. “EDF was instrumental in assisting us with a rigorous yet achievable policy to further our goal and help ensure the products on our shelves are affordable and sustainable.”

Walmart’s new policy initially targets about ten chemicals commonly found in consumer products for replacement with safer ingredients. By 2015, it will require suppliers to disclose all product ingredients online. The company also plans to take its private label products through a more stringent screening process.

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**To safeguard our integrity and objectivity, EDF accepts no funding from Walmart or any other corporate partner.**

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## WHAT KINDS OF PRODUCTS DOES WALMART'S SAFER CHEMICALS POLICY COVER?



Products in these categories must have ingredients disclosed online by 2015.

\* Simulated products are solely to illustrate product categories. Some products may already disclose their ingredients.



“We’ve learned through experience that you can create environmental progress by leveraging corporate purchasing power,” says Elizabeth Sturcken, EDF managing director for corporate partnerships. “And who has more purchasing power than Walmart?” Walmart’s action is sure to have a ripple effect across the entire supply chain.

“When companies like this make a shift, it’s huge,” says Judi Shils, executive director of Teens Turning Green, a nonprofit that promotes environmentally conscious choices for young adults. “You’re influencing Middle America.”

These changes won’t happen overnight, but they represent a major step forward. EDF will closely monitor and verify the reduction of hazardous chemicals until the promise of healthier products becomes a reality. “Ultimately,” says Sturcken, “Walmart’s policy will be evaluated on results.”

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## REFORMING AMERICA'S CHEMICALS LAW

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Voluntary efforts to rein in chemicals of concern are important, but they cannot take the place of strong regulatory standards. EDF is making progress there, too.

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The nation's principal chemicals law, the 1976 Toxic Substances Control Act (TSCA), hasn't been updated in 37 years. It imposes such a high burden on proving harm that EPA could not even ban asbestos. Companies have only had to test about 3% of 85,000 chemicals in commercial use.

EDF has been pressing for reform since 1997, when we published *Toxic Ignorance*, a seminal report that exposed the lack of health data for common chemicals found in everything from baby bottles to household cleaners.



“Pollution and toxic chemicals take a serious toll on our health. We owe it to our children and future generations to ensure the safety of chemicals and significantly cut air pollution.”

Dr. Sarah Vogel, *Health Program Director*

To build support for strong new legislation, we helped found a coalition of 250 health and environmental groups called Safer Chemicals, Healthy Families. We've since been working with state governments and health, labor, business and consumer groups to make the case for reform. Our prodding already has brought results. It pushed EPA to upgrade its chemical reporting practices.

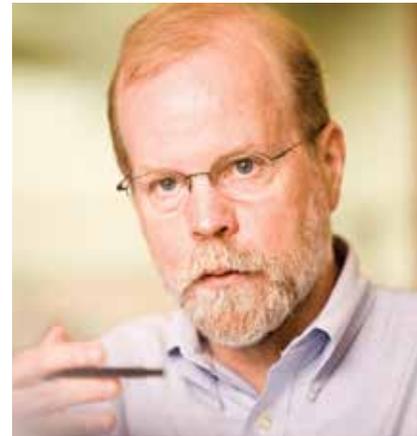
And in 2013, we helped strengthen and advance a reform bill, introduced by the late Senator Frank Lautenberg (D-NJ) and Senator David Vitter (R-LA), that has strong bipartisan support.

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“Reforming the nation's chemicals law is a top priority. With improvements, the bill opens a path to fix a policy that needs a major overhaul.”

Elizabeth Thompson, *President, Environmental Defense Action Fund*

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“We have a once-in-a-generation opportunity to ensure the safety of common chemicals. We need to shift the paradigm, from assuming chemicals are safe unless proven dangerous to requiring evidence of safety.”

Dr. Richard Denison, *EDF Biochemist*

## THE ROAD TO CLEANER AIR

In 2013, EDF and our allies achieved a major victory when EPA proposed standards to cut pollution from new passenger vehicles, in part by reducing sulfur in gasoline.

The standards, called Tier 3, will make the next generation of cars cleaner, cutting nitrogen oxides and volatile organic compounds by 80%. Cars also will emit less particulate pollution, a known trigger for asthma attacks, and less carbon monoxide.

That's good news for the 50 million Americans who live near high-traffic roadways. Children who live in such areas face a higher risk of asthma, cancer and heart disease.

EDF pushed hard to win the new measures. We testified at public hearings, and our members sent nearly 50,000 comments to EPA.

Fully implemented, the rules will prevent 2,400 premature deaths every year and provide up to \$23 billion in annual health benefits, EPA estimates. The cost: less than a penny per gallon of gas.

The proposed limits are backed by automakers because they harmonize policy across all 50 states—and help pollution control equipment work more efficiently. There will be challenges to securing strong final standards, but with health-care providers and automakers allied with us, we're confident we will prevail.

“This is one of the most cost-effective ways to get cleaner and healthier air while strengthening our domestic auto sector.” **United Auto Workers**

## DRIVING DOWN EMISSIONS

1965\_



*Car culture explodes as 1965 Chevy Impala becomes the biggest selling model*

1975\_



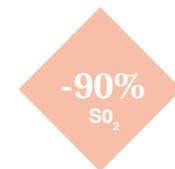
*Congress enacts first fuel economy requirements for cars*

1985\_



*EDF helps convince federal regulators to phase out lead from gasoline*

2000\_



*EPA finalizes Tier 2 emissions reduction program, cutting sulfur emissions up to 90%*

2002\_



*EDF co-sponsors California's historic clean cars law*

2007\_



*EDF plays key role in Supreme Court victory allowing for car greenhouse gas rule implementation*

2011\_



*Automakers agree to limits on climate pollution and stronger fuel economy standards (54.5 mpg by 2025)*

2013\_



*Proposed Tier 3 program will cut sulfur from fuel by 60% and reduce NOx emissions by 80%*

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## Dr. Jalonne White-Newsome / Environmental justice advocate

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**“I think of environmental justice from a human rights perspective. We all have the right to live in an environment that’s safe and healthy, especially kids.”**

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Dr. Jalonne White-Newsome was raised in Detroit. Her family ran daycare centers in the inner city, where she saw firsthand the health impacts of pollution on children, including severe asthma and lead poisoning.

Now a policy analyst for WE ACT, an environmental justice group based in Harlem, White-Newsome is a key EDF ally for clean air. Testifying in support of EPA’s vehicle emissions standards in Washington, she spoke of a little girl with pigtails—the same age as her daughter—getting a nebulizer treatment for asthma at school. Such images reinforce her commitment.

The burden of roadside air pollution falls heavily on low-income families, White-Newsome explains. “We’re talking about people living check to check. They might be in a program trying to go from welfare to work. If they miss a day because their kid has asthma, they miss that opportunity.”

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## STANDING UP FOR TOUGH LIMITS ON MERCURY POLLUTION FROM POWER PLANTS

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EPA’s Mercury and Air Toxics Standards, one of the greatest public health advances in a generation, will eliminate 90% of mercury emissions from power plants and prevent up to 11,000 premature deaths annually. EDF and allies worked for a decade to secure this victory for Americans in 2011.

**Now the coal lobby is trying to kill these mercury rules before they are fully implemented, but EDF’s legal team is committed to defending the standards.**

“They have more money and more lawyers, but we have the law and facts on our side,” says EDF general counsel Vickie Patton.

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Here’s a look at what’s at stake in the mercury battle:

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**35**

tons of mercury are emitted from coal plants annually

**40%**

of U.S. lakes and rivers have mercury advisories

**400,000**

infants are born with high levels of mercury in their blood annually

**\$293**

million spent in 2009 and 2010 by opponents of EPA’s rules

**5**

major cases where EDF defended the mercury rule in 2013

**61**

petitions to halt the mercury standards filed in court

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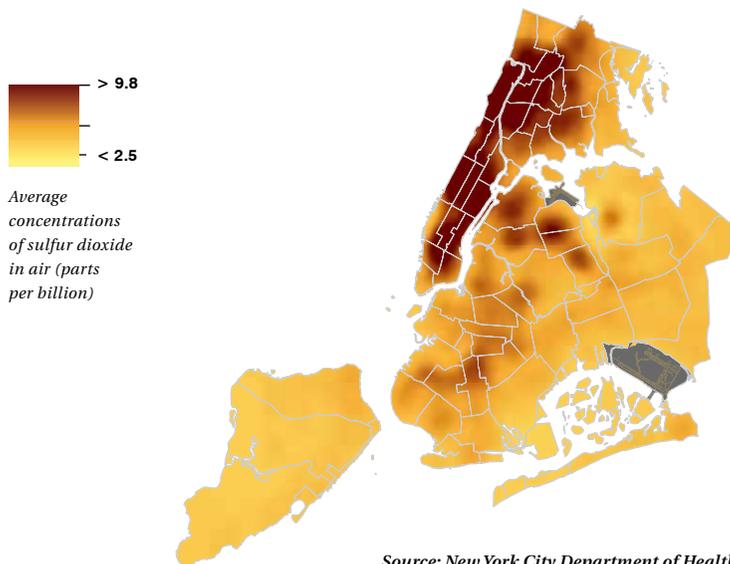
## A BIG WIN FOR NEW YORK CITY'S AIR

New Yorkers are breathing the cleanest air in 50 years, thanks to a partnership between EDF and NYC to phase out dirty heating oil.



We launched the environmental health partnership in 2008, after our report, *The Bottom of the Barrel*, revealed that 1% of New York City's buildings were producing as much soot as all the city's cars and trucks combined. Those buildings, some of them in the city's most exclusive neighborhoods, burned the dirtiest kinds of heating oil.

New York City Air Survey, Wintertime 2008–2009



Source: New York City Department of Health and Mental Hygiene

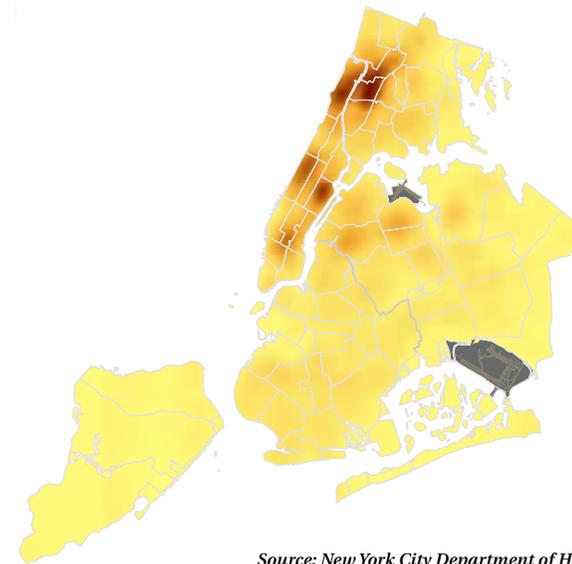
## SINCE 2008

- 2700 > Buildings converted to cleaner heating fuels
- 69% > Reduction in toxic sulfur dioxide pollution\*
- 35% > Reduction in toxic nickel pollution\*
- 23% > Reduction in fine particulate matter (soot)\*
- 800 > Lives saved each year
- 2000 > Hospitalizations or emergency room visits prevented each year

\*Average concentration in air

“The Environmental Defense Fund has played a big part in the success of our initiative.” **Michael Bloomberg**, *New York City Mayor*

New York City Air Survey, Wintertime 2012–2013



Source: New York City Department of Health and Mental Hygiene

## CLEANER AIR FOR OUR NATION'S PORT CITIES



At the Port of Houston, more than one-third of the air pollution comes from 3,000 “drayage” trucks—diesel-fueled heavy trucks that move shipping containers. Many are older models that can be 60 times more polluting than new trucks.

Now, thanks to a program EDF and allies designed, truck owners at the port can obtain grants and low-interest loans to buy cleaner trucks. Shippers including Lowe’s, Target and Home Depot have agreed to use drayage truckers who track emissions and make the switch to cleaner trucks.

Our Houston program has become a model for other port cities around the country, including Baltimore, Charleston and Philadelphia. This builds on EDF’s recent victory requiring ocean-going vessels to use cleaner fuels when near the U.S. coast.

## Joan Dukes / Eye on the future



Marion Johnston

“Our fire season in the West is now two months longer. That scares me.”

Last summer, Joan Dukes watched in horror as huge plumes of smoke from a wildfire billowed near her home in Prescott, Ariz. “Our fire season in the West is now two months longer,” she says. “That scares me.”

An EDF supporter for 35 years, Dukes has long worked as an educator. At Prescott’s Highlands Center for Natural History, where she is a board member, she introduces schoolchildren to local wildlife and plants. “I love hearing the children’s excitement,” she says. “Imagine a little leaf that makes its own sunscreen from

tiny light-colored hairs!” Dukes finds that having a toddler granddaughter has strengthened her commitment to the environment. Inspired by the EDF Legacy Match, she revised her estate plans this year to include a bequest to EDF.

“It’s a way to extend the power of my giving beyond my lifetime,” Dukes says. “When I look into the beautiful, trusting eyes of my granddaughter, my heart swells knowing that by supporting EDF I am doing what I can to make her future a little more secure.”

**EDF LEGACY MATCH: Make an estate gift and we will receive a matching donation of up to \$10,000 today. For details: email [legacy@edf.org](mailto:legacy@edf.org) / toll-free 877-677-7937 / [edf.org/legacy](http://edf.org/legacy).**

## Molly Rauch / One mom who got involved

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**“We need a committed army of moms determined to make our children’s health a national priority.”**

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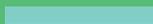
**EDF helped found Moms Clean Air Force, a band of mothers—now more than 150,000 strong—committed to taking direct action to protect the health and well-being of their families.**

**A key member of our team is Molly Rauch, a mom blogger who lives and works in Washington, DC. Her writing on environmental health has appeared in The Huffington Post, The Green Guide and elsewhere. She joined our effort after realizing the extent of health risks her own children face. “We’re in a cycle that, if left unchecked, could condemn our children to an unhealthy, unstable future,” she says.**

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# We can feed the world while protecting its ecosystems.

Through on-the-ground partnerships in 12 states, EDF is helping farmers save money, improve wildlife habitat and reduce pollution without sacrificing yields.



## Wildlife habitat



**Goal:** Conserve wildlife by helping land-owners protect habitat.

**Why:** The unprecedented pace of energy development in the West has put the industry on a collision course with wildlife.

**Our objectives by 2015:**

- 1 / A habitat exchange for the lesser prairie chicken has been created and approved by state and federal regulators.
- 2 / Three new habitat exchanges launch in target states affected by energy development.
- 3 / Half a million acres of prairie chicken and sage grouse habitat are conserved or restored.

**EDF leadership:**

David Festa, *VP Land, Water and Wildlife*  
 Rebecca Shaw, *Associate VP*  
 Courtney Taylor, *Policy Director*

## Mississippi River Delta



**Goal:** Restore coastal wetlands of the Mississippi River Delta.

**Why:** Decades of mismanagement of the Mississippi River system and its Delta have caused the loss of half of Louisiana's threatened coastal wetlands.

**Our objectives by 2015:**

- 1 / \$5 billion of BP penalty funds are secured for priority restoration projects.
- 2 / Design process has begun for an improved navigation system to meet New Orleans's port needs while allowing Mississippi sediment and freshwater to flow again to wetlands.

**EDF leadership:**

Steve Cochran, *Director*  
 Elizabeth Weiner, *Senior Policy Manager*  
 Elizabeth Skree, *Communications Manager*

## Agriculture



**Goal:** Help farmers become stewards of clean air and water.

**Why:** Overapplication of nitrogen fertilizer results in polluted runoff and creates air pollution that worsens climate change.

**Our objectives by 2015:**

- 1 / Our work with Walmart and other food buyers paves the way for cutting fertilizer use by 2016 among the top 20% of U.S. corn farmers.
- 2 / Progress is under way to cut the number of U.S. waterways with dead zones in half within ten years. This is achieved by making it profitable for farmers to protect water quality.

**EDF leadership:**

Eric Holst, *Senior Director, Working Lands*  
 Suzy Friedman, *Director*  
 Jenny Ahlen, *Project Manager, Retail Team*

## Efficient irrigation



**Goal:** Improve the efficiency of agricultural irrigation in the United States.

**Why:** New water management solutions can enhance the sustainability of agriculture, improve rural economies and preserve healthy river flows for wildlife.

**Our objectives by 2015:**

- A new management framework for the Colorado River is in development—one that encourages water sharing and efficient water allocation to meet human and environmental needs.

**EDF leadership:**

Paul Harrison, *Senior Director, Water*  
 Jennifer Pitt, *Director, Colorado River*  
 Aaron Citron, *Policy Analyst*

## FOR FARMERS, CONSERVATION PAYS

In America's heartland, corn is king. Ninety-seven million acres of the crop were planted in the United States in 2013—an area the size of Illinois, Iowa and Ohio combined. Much of the corn finds its way into some 45,000 products on supermarket shelves, from cereal to soda to beef. It's even fueling America's automobiles (40% goes to produce ethanol).

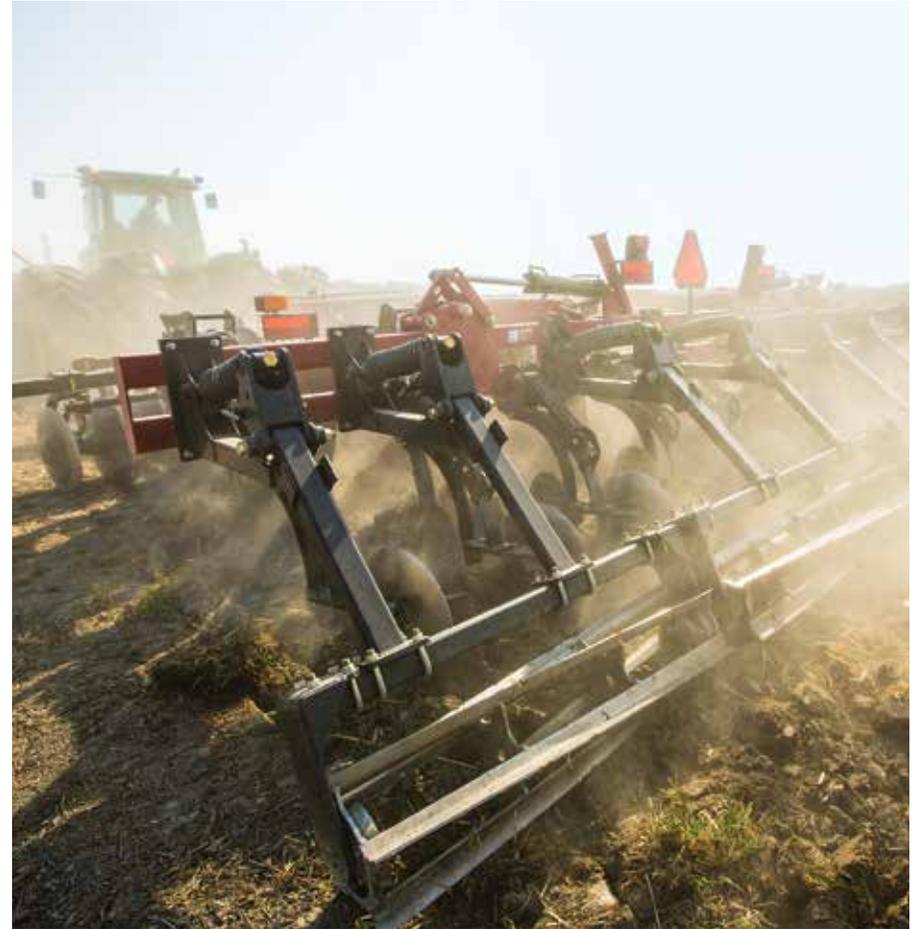
EDF is working across the food supply chain—from farmers to big box retailers—to reduce environmental impacts and see that stewardship pays dividends for those who grow our food.

Growing corn comes at a significant environmental cost. Across the Corn Belt, excess fertilizer runs off fields into critical watersheds, where nitrogen and phosphorous from the fertilizer create algae-filled “dead zones.” Historically, farmers never knew exactly how much fertilizer to use, so they often applied too much, just to be on the safe side. The result: an estimated half of what they applied was not taken up by crops.

Runoff plagues Lake Erie, the Chesapeake Bay and the Gulf of Mexico. Excess fertilizer also leads to nitrous oxide emissions, a global warming gas 300 times more potent than carbon dioxide.

To cut fertilizer waste, EDF helped build networks of farmers in a dozen states from Minnesota to North Carolina. With universities and farm groups, we're helping farmers use better data and field imagery to determine how much fertilizer their crops really need.

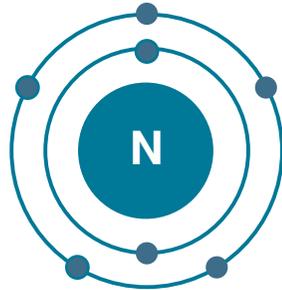
Indiana farmer Rob Ternet is one partner. As he surveys a row of 12-foot-high corn, he says: “In my 29 years of farming, this could



## THE STORY OF CORN



The U.S. produces half the world's corn



The amount of nitrogen fertilizer applied to an acre of corn has increased an average of 25% over the last 40 years



Fertilizer runoff in the Mississippi River has created a dead zone in the Gulf of Mexico the size of New Jersey



Our farm partners have reduced nitrogen fertilizer use by an average of 25%, saving them approximately \$16 per acre

be my highest yield ever.” And he’s done it using about 25% less fertilizer. With fertilizer accounting for as much as one-third of farm costs, that’s money in Ternet’s pocket.

EDF’s goal is to cut fertilizer use for the top 20% of farmers, who produce half the nation’s corn. To help us get there, we’ve teamed up with Walmart, the nation’s largest grocery buyer. In September 2013, the retailer announced commitments from 14 key suppliers, including Coca-Cola and Kellogg’s, to reduce fertilizer waste in their supply chains. In addition, Smithfield Foods, the nation’s largest pork producer, is working with EDF on a plan to improve fertilizer management by farmers.

“We need to make informed use of fertilizer the rule, not the exception,” says Suzy Friedman, our agriculture sustainability director. “That way we can make a real difference in water quality and greenhouse gas emissions and keep farms highly productive.”

“The beauty of EDF is that they’re not trying to regulate the farmer. They’re promoting more efficient fertilizer usage, benefiting the environment without sacrificing yield.” Greg Kneubuhler, Ternet’s crop advisor





**“Our goal is for farmers to become stewards of clean water, fresh air, wildlife and a healthy climate. They will need to do this, if our planet is to sustain a growing population.”**

**David Festa, VP Land, Water and Wildlife**

## Rob Ternet / A conservationist in corn country



**“This land is our livelihood. We want to pass it on in as good shape as when we got it.”**

Rob Ternet started from scratch, working on other people’s farms for 18 years before purchasing his own in 1997. He built a state-of-the-art grain facility with his own hands, and today he and his wife, Kim, and their sons grow corn, soybeans and wheat on 4,500 acres in northeast Indiana, a few miles from where he and Kim grew up.

His success is a testament to hard work and his commitment to the land. For the last four years, Ternet has worked with EDF to use fertilizer more efficiently and implement conservation practices. “We want to do the right thing,” he says. He runs test plots, practices no-till agriculture and grows cover crops such as red clover to reduce soil erosion.

“Farmland is not a renewable resource,” says Kim. “We can’t farm it to death. God gave us this land. It’s our responsibility to treat it well.”

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## NEW LIFE FOR AN ICON OF THE PRAIRIES

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Some of America's rarest animals continue to decline, as existing methods of conservation have not saved habitat fast enough to restore these species' populations. EDF has a new approach.

The lesser prairie chicken, a symbol of the vast western plains, has declined by more than 99% over the past 40 years. It is among the first of 250 plants and animals that could be added to the Endangered Species List over the next five years. Much of the bird's grassland habitat has already been cleared for crops, and now it is further imperiled by booming energy development, sparking a fierce clash between developers and conservationists.

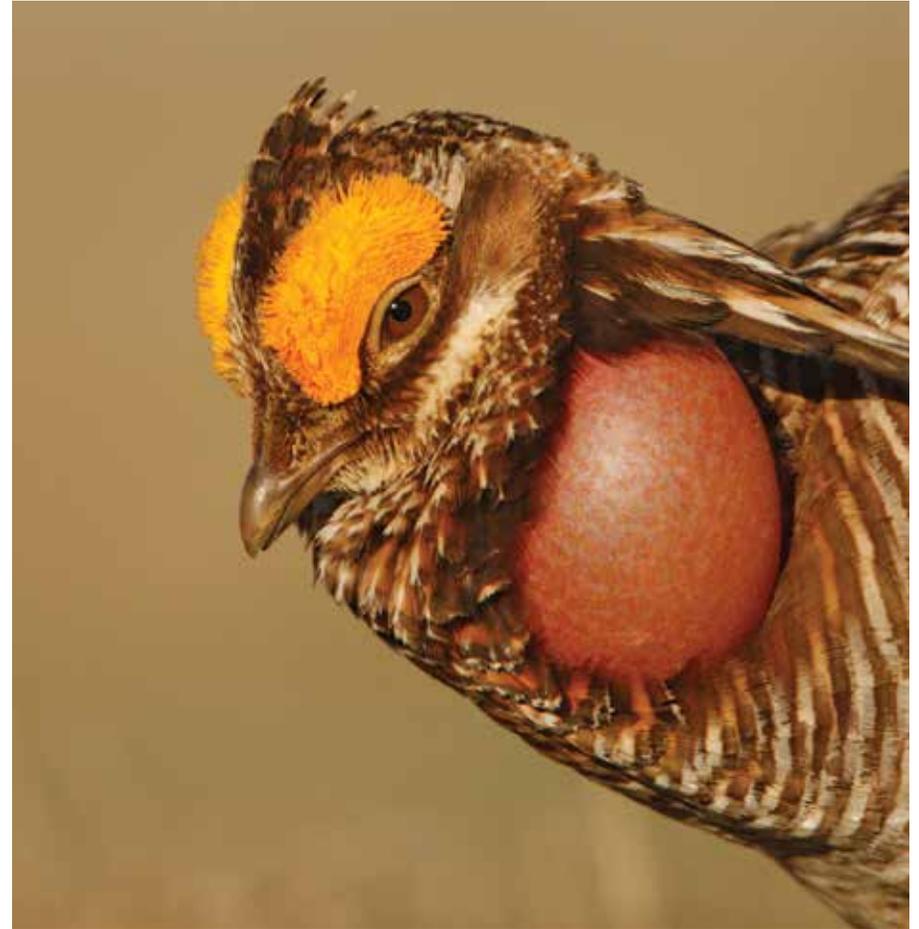
To ease the conflict and save the prairie chicken, EDF introduced habitat exchanges. Simply put, an exchange lets landowners earn credits by restoring wildlife habitat on their land. Once the habitat is verified, the owner can sell the credits to developers to offset the impact of development nearby. We first used this approach at the Fort Hood Army Base in Texas, where neighboring ranchers created habitat for endangered golden-cheeked warblers.

Now our coalition of scientists, landowners and energy companies is showing how habitat exchanges could become a national model for saving species in a fast-changing landscape.

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**“For every acre developed, our program requires two acres restored, thereby enlarging high-quality wildlife habitat.”** Eric Holst, *Senior Director, Working Lands*

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## WHAT'S NEW ON THE GULF COAST? POSSIBLY THE LARGEST ECOSYSTEM RESTORATION IN THE WORLD

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**123 million Americans live by a coastline.**

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Coastal communities are increasingly vulnerable to sea level rise and pollution. In Louisiana, vanishing wetlands have left New Orleans exposed to storms, endangering the nation's most significant port. The 2010 BP spill made the problem worse, but created an opportunity to change how the U.S. manages wetlands.

EDF helped build a coalition of scientists, business leaders, local communities and government officials that persuaded Congress to dedicate billions in BP penalties to restoring the Gulf Coast. In 2013, help began to flow, with \$1.25 billion allocated to rebuild the threatened Mississippi River Delta. EDF is making sure the money goes where it's needed.




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## GULF PROTECTOR

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For 40 years, EDF attorney James Tripp has been helping to save the Gulf Coast. He's recruited barge owners, restaurateurs and other environmentalists to prevent expansion of unneeded navigation channels. He's saved precious bottomland hardwood forests and helped expose how the U.S. Army Corps of Engineers cooked its books on a billion dollar boondoggle to enlarge underused locks on the Mississippi.

Today, Tripp serves on Louisiana's commission on coastal restoration, which makes him an architect of the greatest wetlands restoration project in American history. "We've pushed the system to the edge," he says. "Now it's time to rebuild it."

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"EDF's expertise in the region proved invaluable as we put together recommendations to restore the Gulf Coast." **Ray Mabus**, *Secretary of the Navy*

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## A ONCE-IN-A-LIFETIME OPPORTUNITY TO REPAIR A NATIONAL TREASURE IN THE GULF OF MEXICO

01

### *Wetlands restoration*

The road map for rescuing the Gulf is Louisiana's Coastal Master Plan, which EDF helped shape. It calls for rebuilding 860 square miles of land by reconnecting the sediment-rich Mississippi to its wetlands. As its first step, the state is proceeding with our cornerstone restoration project in Barataria Basin, where the newest land in the United States will soon be created.

02

### *Scientific guidance*

Strong science is a prerequisite for work on this scale. EDF scientist Dr. Angelina Freeman helped create a model to restore wetlands near Myrtle Grove, which is now being used by the government as a guide. Our scientists have demonstrated how people, wildlife and the economy all benefit from coastal restoration.



03

### *Help for communities*

We're helping identify business opportunities that will follow coastal restoration, and making sure that hard-hit communities benefit.

04

### *Engaging business*

EDF meets regularly with the navigation, fishing and tourism industries to encourage their involvement and support for restoration efforts. Our message: prosperity depends on conservation.

05

### *Pressure on BP*

As evidence accumulated that spilled oil is working its way up the food chain, BP opted to go to trial rather than pay civil damages. We organized rallies and press conferences and generated 133,000 petitions to the Department of Justice to hold BP fully responsible.



## A GREAT AMERICAN RIVER CAN ONCE AGAIN REACH ITS DELTA

Until the early 20th century, the Colorado River flowed freely to its delta, where wetlands and forests flourished on two million acres. But so much water has been drawn from the river that it dried up before reaching the Gulf of California. Now, thanks to an agreement that EDF and our U.S. and Mexican partners helped broker, some of the original ecosystem can thrive, benefiting farmers and wildlife. The pact provides a framework for sharing water and for water conservation. Already, farmers are getting paid for selling water rights to our water trust. This marks the first time Mexico and the United States have agreed to release water to restore the delta's ecological health.

The pact “is the most important agreement that has ever been put together between the United States and Mexico on water in the Colorado River.” Ken Salazar, *Secretary of the Interior 2009–2013*



## Susan Ford Dorsey / A business approach to sustainable farming



“EDF makes things happen. It looks for solutions and doesn't just make ideological arguments.”

EDF trustee Susan Ford Dorsey has supported EDF's corporate partnerships work through the Sand Hill Foundation, which she established with her late husband Tom Ford, a real estate developer who helped preserve open space on the San Francisco Peninsula. “The fact that EDF worked with corporations like McDonald's appealed to us,” she says.

Today, Dorsey also supports our work on agricultural sustainability. “The impact of so much wasted nitrogen fertilizer on

the water supply is pretty stunning,” she says. “EDF understands how the supply chain works and knows how to get the incentives right—the carrots and the sticks—so everybody wins: greater crop yields for farmers and less nitrogen pollution in the environment.”

Dorsey adds, “EDF makes things happen. It looks for solutions and doesn't just make ideological arguments. It works with all the players. In the long run, that's what it's all about.”

## EXTENDING A WELCOME MAT TO WILDLIFE

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**The world's largest population of endangered golden-cheeked warblers nests at Fort Hood Army Base in Texas. The birds are doing fine, thanks to a program designed by EDF. Fort Hood is paying to restore warbler habitat on nearby private land. That allows the base to continue maneuvers. Meanwhile, landowners are getting paid and warblers thrive in greatly expanded habitat.**

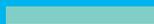
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**“Nothing like this has been tried before. It absolutely could work at other bases.” Ron Perry, Director, Mission Support Element, III Corps Fort Hood**

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# We can restore the abundance of the oceans.

From the Gulf of Maine to the Gulf of California, decades of overfishing and faulty management have devastated fish and coastal communities. Now, trailblazing fishermen are embracing a system of market incentives that is restoring fisheries and the towns that depend on them.



## United States



**Goal:** To restore fisheries to abundance, make catch shares the standard approach.

**Why:** Catch shares empower fishermen to be stewards, boosting profits and fish populations.

**Our objectives by 2015:**

- 1/ Catch shares are in place for most fish caught in federal waters (*already achieved*).
- 2/ Catch share fisheries are on track to recover.
- 3/ Catch shares are tested for the first time in recreational fisheries.

**EDF leadership:**

Amanda Leland, VP  
John Mimikakis, Associate VP  
Heather Paffe, Associate VP

## European Union



**Goal:** Build momentum for the recovery of commercial fisheries.

**Why:** European fisheries are in the worst condition in the developed world, with more than 75% overfished.

**Our objectives by 2015:**

- 1/ EU policies and funding encourage rights-based approaches for fisheries.
- 2/ New management is tested with local groups in fisheries in Spain, Sweden and the United Kingdom.

**EDF leadership:**

Britt Groosman, Program Director, EU

## Developing world



**Goal:** Combine catch shares and marine reserves to protect small-scale fisheries.

**Why:** Billions of people rely on fish for protein, including from near-shore reefs.

**Our objectives by 2015:**

- 1/ Fish Forever partnership reaches its first fishing villages in Indonesia and the Philippines.
- 2/ Catch shares are being developed or implemented in at least ten fisheries in Mexico, Belize and Cuba as models for replication throughout Latin America and the developing world.
- 3/ EDF and partners have leveraged the World Bank's financial resources to drive transformation of fisheries in three or more countries.

**EDF leadership:**

Thomas Grasso, Senior Advisor  
Scott Edwards, Senior Director  
Pedro Zapata, Mexico Director

## Ocean habitat



**Goal:** Protect and restore ocean habitats.

**Why:** Marine protected areas complement catch shares by providing a haven for fish populations to rebuild.

**Our objectives by 2015:**

- 1/ At least 23,000 square miles of key ocean habitat gains full protection (*already achieved*).
- 2/ The use of catch share management is shown to increase fishermen's compliance with marine protected areas.

**EDF leadership:**

Doug Rader, Chief Oceans Scientist  
Rod Fujita, Director of R&D

## SHARING THE CATCH IN THE GULF OF MEXICO

At sundown, the 45-foot *Avenger*, a commercial fishing vessel, rolls gently as crew members bait hooks 80 miles off Galveston, Texas. “I’ve been slammin’ fish on and off for ten years,” says Frank, a wiry deckhand with a sprawling treasure map tattoo. “It’s tough work, but you can make good money.”

The bounty has been good recently, thanks to a management program EDF helped implement for Gulf red snapper in 2007.

A decade ago, this fishery was on the brink of collapse. With fish stocks plummeting, regulators cut the season to a few days per month, often in winter when the Gulf was at its roughest.



The shortened seasons hurt fishermen financially and gave rise to dangerous “derbies” in which the fishing boats raced into storms. And the restrictions didn’t solve the overfishing problem.

The short windows also meant too many fish were brought to market at the same time, creating a glut that crashed prices. “My life was a disaster,” recalls Captain Buddy Guindon. “During the derbies, I didn’t go to my kid’s baseball games. I didn’t go to church. I didn’t do all the things normal people do.”

# 65%

fish caught in U.S. waters  
under catch shares

# 68%

increase in  
fleetwide revenue

# 66%

decrease in waste



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**EDF proposed a different approach, called catch shares.**

Under catch shares, scientists determine the total allowable annual catch for a fishery, and fishermen are assigned a percentage of it, based on their catch history. Now fishermen have a stake in the fishery's recovery: as populations rebound, so does their catch.

**We brought fishermen to Washington to build support and helped design a catch share program that was approved overwhelmingly.**

“We’re catching bigger fish,” says Guindon. “Our prices at the dock have increased and our costs have gone down.” The program has also helped end overfishing and restore balance to the ecosystem.

The Gulf red snapper population has improved enough to warrant a 70% increase in the allowable catch since 2008. The recovery was so remarkable that in 2013 the Monterey Bay Aquarium took red snapper off the “avoid” list in its seafood guide. For the consumer, this means sustainably caught red snapper all year long.

“Catch shares simply couple responsibilities and rewards,” says our Oceans VP Amanda Leland. “Fishermen are safer, fishing is more profitable, and the oceans are more abundant.”

The success in the Gulf has contributed to the creation of catch share programs for the Pacific Coast and New England. All told, 65% of fish landed by commercial fishermen in U.S. federal waters are now under catch shares management, up from 10% when we started catch shares work in 1996.

“Before catch shares, my sons didn’t have a future as commercial fishermen,” says Guindon. “Now they do.”

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“If we protect habitats and offer fishermen a financial stake in the recovery of fisheries, we can revive coastal communities and bring the oceans back to life.”

Amanda Leland, VP Oceans

## Buddy Guindon / Part of a revolution in sustainable seafood



“EDF was the first environmental organization I’ve met that shows an interest in what’s good for fishermen.”

For Buddy Guindon, fishing and family are one and the same. He has spent 35 years in Galveston, Texas, on the water and running a fish market alongside his brother, wife and sons. When the BP oil disaster sunk consumer confidence in Gulf seafood, Guindon teamed up with EDF to create Gulf Wild, a system for tagging each fish with a unique number, so customers can go online to see where it was caught. “You should know where your seafood is from,” he says.

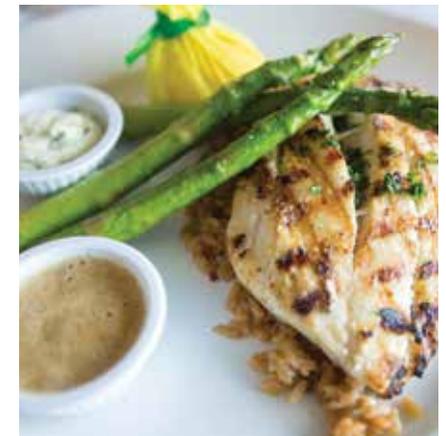
The program has taken off. More than 500,000 Gulf Wild fish have been sold in markets and restaurants around the country. The Gulf Wild label is a guarantee of authenticity at a time when as much as a third of the seafood sold in the United States may be mislabeled.

“This is exactly what diners are demanding,” says celebrity chef Rick Moonen, who owns RM Seafood and Rx Boiler Room in Las Vegas. “We want to know that the Gulf fish we’re buying is authentic, safe and from a sustainable fishery. Gulf Wild provides that assurance.”

## FROM SEA TO PLATE

Here’s how Gulf Wild brings fresh, local seafood to you:

- 6:50 pm > Captain logs the location of a catch, validating that it was caught sustainably.
- 8:00 am > Vessel returns to port. Snapper are tagged with the Gulf Wild label.
- 9:12 am > Captain checks with chefs to report on the catch and agree on deliveries.
- 9:57 am > Truck departs to make its first delivery to distributors in Houston.
- 11:00 am > Fish is delivered by bicycle to local restaurants in Galveston.
- 12:30 pm > Plate of blackened red snapper is served at Gaido’s Restaurant, Galveston.

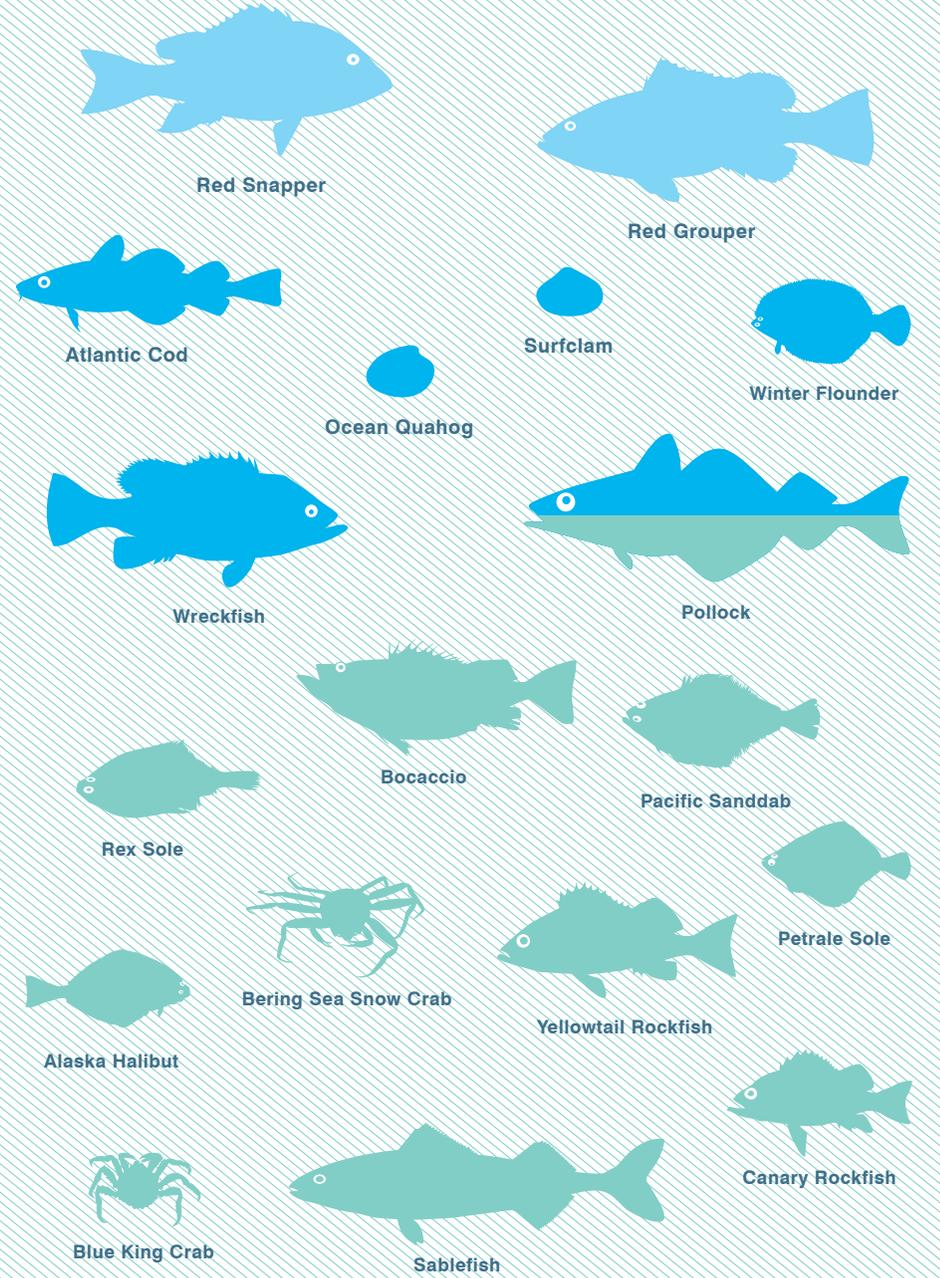
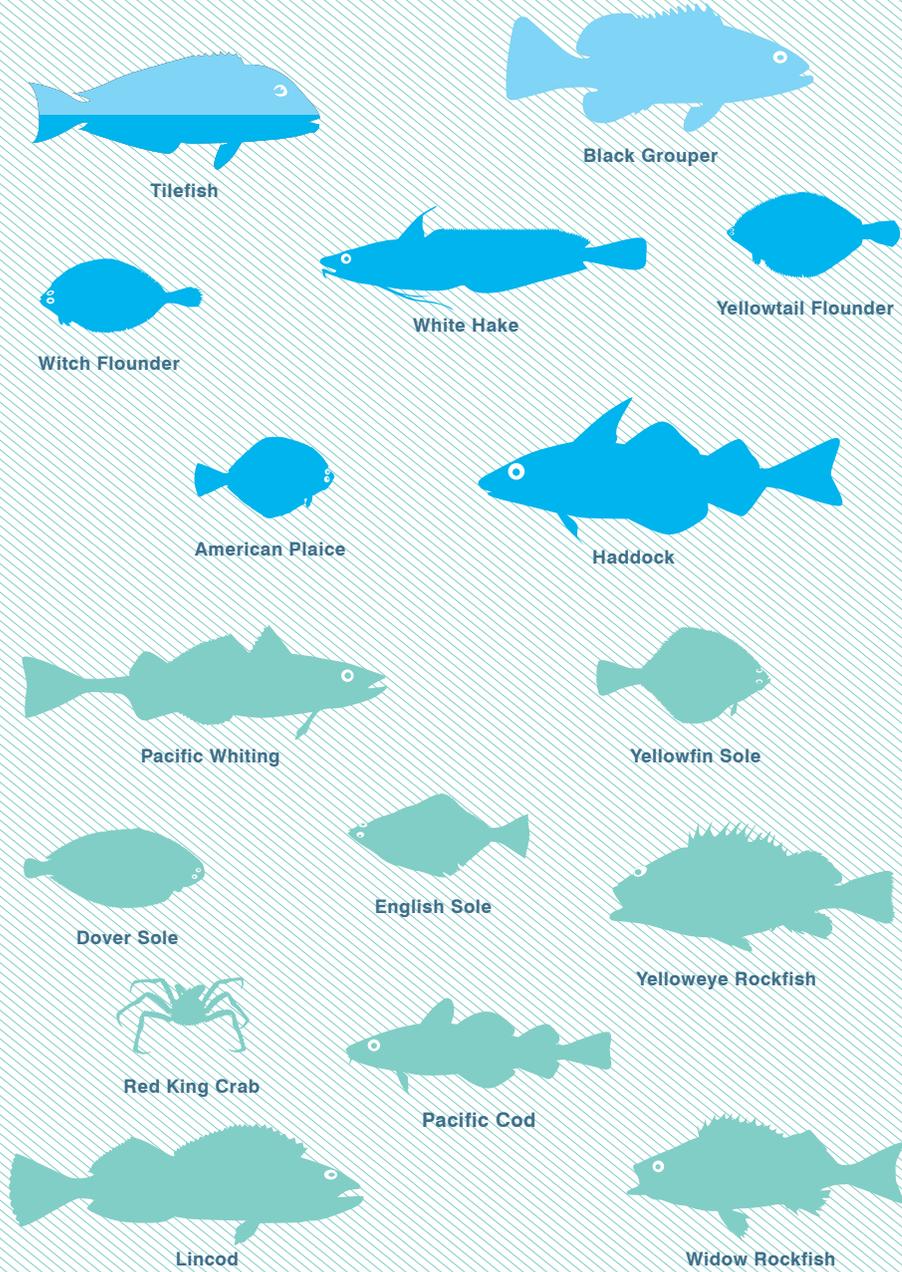


COMMON SEAFOOD UNDER U.S. CATCH SHARE PROGRAMS

Gulf of Mexico

Atlantic Ocean

Pacific Ocean



## TURNING THE TIDE IN BELIZE



The Mesoamerican Reef—the largest barrier reef in the Western Hemisphere—hugs the Belize coast and supports 500 species of fish. Many Belizians are dependent on the reef for their survival, but overfishing has taken a toll.

EDF teamed up with the Wildlife Conservation Society and local partners, enlisting fishermen and influential policy makers to preserve this extraordinary reef.

Under our program, local fishermen have exclusive rights to fish in a designated area, which thrives because of a nearby Marine Protected Area. They are required to record their catch, and many are monitoring illegal fishing, a huge problem.

**After two years, fishermen themselves are enforcing the rules and illegal fishing is down by more than 60%, allowing them to safely increase their catch. The success has led the government of Belize to ask EDF's help to roll out the system nationwide.**

## FISH FOREVER



**Can 45 million coastal fishermen in the tropics feed local populations while allowing marine ecosystems to flourish?**

To tackle the challenge of small coastal fisheries, EDF is collaborating on a global campaign in partnership with the University of California at Santa Barbara (UCSB), which brings expertise in economic assessment, and Rare, a nonprofit that specializes in social marketing for biodiversity conservation.

The partnership, called Fish Forever, will empower small-scale fishermen in developing countries with practical solutions to reverse overfishing. We've begun work in the near-shore fisheries of two leading fishing nations, Indonesia and the Philippines.

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“Fish Forever is a unique conservation opportunity where you can manage for local economies while at the same time enhance food security and biodiversity.” Dr. Steven Gaines, *UCSB*

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## SAVING THE GREAT PREDATORS OF THE SEA

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Sharks have roamed the oceans for 400 million years, but that ancient lineage does not guarantee a future. Today they're in serious decline, with millions of sharks killed every year.

“In the Gulf of Mexico populations of some large sharks, including tigers and hammerheads, have fallen by as much as 90%,” says Dr. Douglas Rader, EDF's chief Oceans scientist. As top predators, sharks play a crucial role in the health of marine ecosystems, keeping them in balance.

There's no easy answer to the crisis, because many sharks are highly migratory. They're also a source of food in many nations.

EDF is leading an effort with Mote Marine Laboratory to save sharks in the Gulf of Mexico—bringing together Cuba, Mexico and the United States in a tri-national conservation partnership, the first of its kind anywhere in the world.

We're conducting surveys of sharks along Cuba's northwest coast and Mexico's Gulf coast. “Until now, the scattered research has never been pulled together to build the big picture of Gulf sharks,” says Pam Baker, EDF's Gulf director.

The collaboration will yield the data necessary to build management programs that significantly reduce the killing of sharks. “If successful, the tri-national program for sharks can be a model for management of other highly migratory species like tuna and swordfish,” says Baker.

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## A SHARED VISION FOR CUBA

For more than a decade, EDF has been working with Cuban scientists on issues ranging from coral reef conservation to sustainable coastal development. With Cuba slowly opening the door to private enterprise, safeguards are critically needed.

EDF helped lay the foundation for a network of Marine Protected Areas and is now working to strengthen protections for the legendary Gardens of the Queen National Marine Park, which teems with giant fish uncommon elsewhere in the Caribbean. We're also partnering with Cuban government officials and fishermen to rebuild important fisheries through the development of community-based fishery cooperatives to achieve our joint economic and conservation goals.

**"While politically distant, the U.S. and Cuba are ecologically linked and must collaborate to protect their marine life."** Dan Whittle, *Director, EDF Cuba program*



## Philip and Alicia Hammarskjold

Making the case for catch shares



**"These experiences have given me an appreciation of the ocean's ecosystems and the strains they are under."**

Philip Hammarskjold

Philip Hammarskjold and his wife Alicia both spent childhood summers near the ocean—she on Block Island, he on the Jersey shore. At a young age, Hammarskjold developed a passion for the ocean, spending many hours lifeguarding, boating, fishing and scuba diving.

Now CEO of a private equity investment firm, he continues to spend time on the water with family and friends in New England and on family vacations around the world. "These experiences have given me an appreciation of the ocean's ecosystems and the strains they are under," Hammarskjold says.

The couple's love of the ocean led them to support EDF's work on catch shares in New England and, more recently, internationally. "The data show that catch share programs really are effective in driving sustainable fishing," Hammarskjold says.

He recalls a recent EDF event he and Alicia hosted at their Block Island home for friends and neighbors. "EDF staff did a fantastic job making the case for catch shares," he says. "One guest in particular—a catch share skeptic—said to me afterwards, 'Wow, those people really know what they're talking about.'"

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# A BUSINESS PERSPECTIVE ON CATCH SHARES

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“As an investor, I can see why catch shares work. They represent an asset that fishermen want to protect, a long-term stake in their fishery’s recovery.”

Stanley Druckenmiller, *EDF Trustee*

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## Environmental Defense Fund

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**Fred Krupp**, *President*

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**Liza Henshaw**, *Chief Operating Officer*

---

**Paula Hayes**, *Senior VP Global Strategic Initiatives*

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**Eric Pooley**, *Senior VP Strategy and Communications*

---

**Linda Nelson**, *Senior VP Development*

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**Peter Accinno**, *CFO, Treasurer, VP Finance & Administration*

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**Brian Attas**, *Chief Information Officer*

---

**Felipa Bernard**, *VP Human Resources*

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**Cynthia Hampton**, *VP Marketing*

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**Carol Kinzler**, *Chief of Staff*

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### *Program Leadership*

**Diane Regas**, *Senior VP Programs*

---

**Gwen Ruta**, *VP Programs*

---

**David Festa**, *VP West Coast; VP Land, Water and Wildlife*

---

**Daniel Dudek**, *VP*

---

**Steven Hamburg**, *Chief Scientist*

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**Nathaniel Keohane**,  
*VP International Climate*

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**Amanda Leland**, *VP Oceans*

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**Jim Marston**, *VP U.S. Climate & Energy*

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**Tom Murray**, *VP Corporate Partnerships*

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**Vickie Patton**, *General Counsel*

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**Thomas Sterner**, *Visiting Chief Economist*

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**Elizabeth Thompson**,  
*VP U.S. Climate and Political Affairs*

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## Environmental Defense Action Fund

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**Elizabeth Thompson**, *President*

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**Fred Krupp**, *Executive Director*

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**Peter Accinno**, *CFO, Treasurer*

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**Joe Bonfiglio**, *Deputy Director*

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### Credits

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**Principal photography** *John Rae*

**Auditors** *EisnerAmper LLP*

**Lead writers** *Rod Griffin, Peter Klebnikov*

**Photo editor** *Tim Connor*

**Donor profiles** *Leslie Valentine*

**Art director** *Christina Baute*

**Design** *Blok Design, Toronto*

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**EDF's mission**  
**is to preserve the**  
**natural systems**  
**on which all life**  
**depends. Guided**  
**by science and**  
**economics, we find**  
**practical and**  
**lasting solutions**  
**to the most serious**  
**environmental**  
**problems.**