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Finding the ways that work

THE WAY FORWARD 2014 ANNUAL REPORT

Environmental Defense Fund'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.

LOOKING BACK ... LOOKING FORWARD

A t Environmental Defense Fund, we recognize that our work requires perseverance and long-term commitment. The important advances won for the environment in 2014 resulted from the sustained efforts of EDF and others over many years—and we will need to remain vigilant to defend and build upon these gains in the years ahead.

Since the 1990s, EDF has relied on a series of five-year strategic plans to map out efforts on the scale needed to protect climate, oceans, ecosystems and health. This is the final year of one such plan and the gateway to the next. Our vision for 2015–2019 is captured in Blueprint 2020, a document you can find at *edf.org/ blueprint2020.*



CLIMATE In our 2009 plan, we aimed to help put the U.S. on a path to reduce greenhouse gas emissions 17% by 2020 (compared to 2005). Today the country is on this path—but not by means of the legislation EDF had advocated.



That bill passed the House in 2009 but stalled out in the Senate. We then looked for other ways to achieve the same goal. Our 2020 target for U.S. emissions is still within reach, partly due to low natural gas prices but also thanks to advances including vehicle mileage standards, state-level actions and EPA's proposed Clean Power Plan—solutions that EDF and our allies helped move forward. We still need bigger cuts, so EDF has launched a clean energy program that is dedicated to clearing away the regulatory and market obstacles that slow the transition to renewable energy.

On the global climate front, we have faced a persistent lack of progress toward an international agreement, one of our 2009 aims. Dramatic advances in a few

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large-emitting countries can help break the logjam. Already we are heartened by some bright spots, including China's launch of seven pilot carbon trading programs to address climate pollution and Brazil's success in reducing its Amazon deforestation rate by 70% in the past decade.

Building on this progress, Blueprint 2020 lays out a series of actions in several key countries that can reverse the rise of global greenhouse gas emissions within five years—which would be a remarkable reversal of the two-century-long trend of increasing emissions. **OCEANS** In an effort to reduce the problem of overfishing, our 2009 plan aimed to bring 50% of U.S. federal fisheries into a powerful management program called catch shares by the end of 2014. We have exceeded that goal, having already reached the 65% mark.

Many fish populations are rebounding— Gulf of Mexico red snapper, one of our earliest catch share successes, has tripled in abundance. Far fewer fish are being wasted than under the old rules—80% less in the Pacific groundfish fishery—and fishermen are better off. No wonder EDF was invited to work with fishermen and nonprofits in eight other countries to help adapt these methods to different cultures, laws and fishery conditions. This puts us well ahead of our 2009 goal to help bring catch shares to three more countries by 2014.

Buoyed by this success, we have set a goal in Blueprint 2020 to help bring sustainable fishing to one-third of the world's catch by 2020.

ECOSYSTEMS We have achieved many local successes on working lands since 2009. For example, we engaged farmers across the Midwest in cutting excess fertilizer that pollutes air and water, and we pioneered an exchange program where ranchers are paid to protect more wildlife habitat than is lost to development on lands nearby.

We were frustrated, however, by the difficulty of scaling up these local approaches to the level needed. So in Blueprint 2020, we will expand our work with corporate partners and economic incentives to accelerate these solutions. For example, companies like Campbell's Soup and General Mills will work with their suppliers to reduce excess use of fertilizer. The 2010 BP Deepwater Horizon oil disaster put at risk more than three decades of efforts to restore coastal wetlands in Louisiana. So we worked with our sister organization, EDF Action (*see p. 7*) to help Congress pass a law directing 80% of BP's civil penalties to the Gulf Coast. The first payments of billions of dollars in civil and criminal penalties are changing the landscape of restoration as we begin to work at the scale needed to save these wetlands.

HEALTH Sulfur dioxide pollution from power plants has been cut 68% from 2005 levels, approaching the goal we set in 2009, while emissions of nitrogen oxides were halved and mercury was reduced substantially, as was air pollution from ships. Although we have not yet reached our goal to reform the obsolete Toxic Substances Control Act, the nation's main chemicals law, we made more progress in Congress and with retail partners than ever before, so this reform remains a goal in Blueprint 2020.

Since 2010, EDF has built a major effort focused on securing strong regulations to protect air, water and public health from impacts of oil and gas development and to reduce emissions of methane, a potent greenhouse gas, from the natural gas supply chain (see *p. 16*). In Blueprint 2020, we are continuing to seek strong rules, enforcement and penalties for noncompliance.

The vital progress of the past five years has come about not through the work of EDF alone but through many groups' combined and independent efforts. This will be even more true in the future. As we say in Blueprint 2020, no single entity can do all that is needed to address today's urgent environmental problems. But by working in partnership with many others, we can make a difference.

Thank you for your support, which makes our work possible.



Fred Kungo

Fred Krupp, President

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Carl Ferenbach, Chairman

"One thing I've always liked about the Environmental Defense Fund is its hardheaded approach. Founded by scientists, it believes in data, not hysteria. It promotes market incentives to change behavior and isn't afraid to work with industry. Utterly nonpartisan, it is oriented toward practical policy solutions."

Joe Nocera New York Times columnist

Finding the ways that work

A DIFFERENT KIND OF ENVIRONMENTAL ORGANIZATION

What if Ph.D. scientists, economists, MBAs and policy experts could work together to solve environmental problems? It's happening every day at Environmental Defense Fund.

The diverse skills that we apply to each environmental challenge create opportunities for alliances that produce lasting change. "We are using networked sensors and other emerging technologies to ground the policy debate with strong data."

Dr. Steven Hamburg *Chief scientist*

"Environments are destroyed when markets fail to protect them. EDF and our allies help design markets that protect rather than destroy."

Dr. Frank Convery Chief economist

"Accepting no funding from our corporate partners frees us to set more aggressive goals and influence entire industries."

Tom Murray *VP Corporate Partnerships*

SCIENCE

ECONOMICS

PARTNERSHIPS



Steven Hamburg

Tom Murray

REACHING ACROSS THE AISLE

asting environmental solutions result from having everyone pitch in, regardless of their political views. "That's why we engage in policy advocacy that pushes both political parties to be better on our issues," says Elizabeth Thompson, president of EDF Action, Environmental Defense Fund's political advocacy partner. "Our strategy is even more essential now that the White House and Congress are controlled by different parties." EDF Action is free to do things that EDF cannot, including unlimited lobbying of Congress. It does this by raising dollars that are not tax deductible.

EDF Action prevailed in 2014 when the House voted 223–185 to defeat an appropriations rider that would have banned expansion of catch shares, the management approach that has helped

POLITICS



Elizabeth Thompson



fish stocks recover. Three years ago, a similar rider passed in the House by 100 votes. The turnabout was made possible by a strategy that included cultivating GOP champions and bringing fishermen to Washington to make their case.

"Advancing smart policies requires smart politics. EDF's Strategic Partners help widen support on both sides of the aisle."

Elizabeth Thompson President, EDF Action This was just one of EDF Action's 2014 victories. For Climate, it helped defeat legislative efforts to undermine EPA's Clean Power Plan (*see p. 10*), and it defended Republicans in Kansas who were protecting state renewable energy standards. For Health, EDF Action helped advance reform of federal chemicals policy. For Ecosystems, it secured funding for wetlands protection.

Our Strategic Partners, a network of influential supporters, help deliver EDF's message. Says Thompson: "Lawmakers listen to their supporters, and many in both parties want action on the environment. We amplify their voices." We can cut carbon and chart a clean energy future "The work EDF has done in combining moral commitment, science and economics has been critical. Can you imagine what it would look like if preserving the Earth and handing it to our children were the moral project of our time?"

Dr. Jim Yong Kim World Bank President, addressing EDF Board of Trustees, May 2013

TAKING ON THE BIGGEST CARBON EMITTERS

H istorians may look back to June 2, 2014, as the day the United States finally started getting serious about global climate change. That morning the Environmental Protection Agency, in an action long advocated by EDF, proposed the Clean Power Plan, the first-ever national standards to cut carbon dioxide pollution from existing power plants. Fossil fuel plants cause about a third of U.S. greenhouse gas emissions, more than any other source.

"These rules are absolutely necessary," says EDF general counsel Vickie Patton. "They'll help protect our children from smog, curb respiratory problems and cut the pollution that is threatening our communities with extreme weather." As expected, major coal interests and their supporters in Congress have vowed to scuttle the plan. Anticipating the barrage, EDF joined with allies like the American Lung Association to launch a campaign —in the courts, on Capitol Hill and with the public—to ensure the final rules are strong. EDF Action, our political lobbying partner, has already been instrumental in beating back legislation that would have defunded EPA. But future attacks are expected.

EPA's authority to act was established in a series of court cases in which EDF played a role, including at the Supreme Court, which ruled in 2007 that the Clean Air Act applies to greenhouse gas emissions. Since then, EDF has worked with, and sometimes sued, EPA to secure carbon pollution protections. The Clean Power Plan would cut emissions from the power sector by 30% from 2005 levels by 2030. It gives states flexibility in meeting their targets, whether by deploying renewable energy, ramping up energy efficiency or creating regional carbon markets to achieve reductions at the lowest cost. EPA estimates that for every \$1 invested in complying with the plan, Americans will gain \$7 in health benefits.

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"We'll need to be in the trenches to make sure the final power plant rule is strong and defended in court."

Vickie Patton EDF general counsel



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In 2013, global carbon emissions jumped **2.3%** to record levels.

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Throughout the process, EDF and allies have been pushing for deep reductions. We are showing how our clean energy work in key states already achieved steep cuts. Colorado, for example, passed bipartisan legislation, backed by EDF, that will improve air quality while ensuring a reliable supply of electricity. Going forward, we'll work with states to help implement the final rules. "The new plan will drive innovation, allowing America to lead in clean technologies," says EDF attorney Megan Ceronsky. "And it will make our air safer to breathe."



PARTNERS IN CONTROLLING METHANE Mark Heising and Liz Simons / EDF donors

Stewardship of the planet has always resonated with Mark Heising and Liz Simons, and they found that their views align with EDF's approach of using science and economics and engaging corporations. "To move the needle on climate today, we need to reduce short-term forcers like methane, in addition to carbon dioxide," says Heising, an EDF trustee who co-chairs

our climate committee. "We learned EDF was looking at the methane problem, and we got in early." Both were impressed by peer-reviewed studies that EDF launched with dozens of university researchers to analyze methane leaks. As Simons, president of their family foundation and a funder of early childhood initiatives, says: "We want a safe, habitable planet for our children and all the world's children."

"EDF has the breadth and depth to come up with integrated, scalable solutions to complex problems." Mark Heising



CALIFORNIA: A CLIMATE LAUNCH PAD

When California's Global Warming Solutions Act (AB 32) was signed into law in 2006, naysayers said it would hurt the economy. But the legislation, which EDF and NRDC co-sponsored, has helped California cut greenhouse gas emissions even as the state's economy has grown. AB 32 sets an economy-wide cap on emissions, requiring a reduction to 1990 levels by 2020. Its centerpiece is a carbon market targeting 350 of California's largest polluters. The declining cap creates a market for innovations.

California has also set rigorous standards for cleaner cars, renewable energy and low-carbon fuels, spurring changes in the way automakers design cars, utilities generate electricity and refineries make fuel. Among the innovations: EDF partnered with rice growers in the Sacramento Valley to develop a first-ofits-kind project to reward farmers in the carbon market when they reduce methane emissions.

A flourishing clean-tech economy

- Clean-tech jobs have grown ten times faster than jobs in other sectors
- \$21 billion in clean-tech venture capital has been invested since 2006, more than in all other states combined



California's economy-wide cap on climate pollution will improve conditions in disadvantaged communities like Wilmington, an industrialized area in Los Angeles.

 15% of California's electricity comes from renewable energy, compared to 5% nationwide

A boom in innovation

- 15% of new cars sold must be zeroor near-zero emission vehicles by 2025
- California represents 40% of all U.S. plug-in electric vehicle sales
- In 2013, as much rooftop solar was installed as in the previous 30 years

Helping people reduce their footprint

- 9% reduction in greenhouse gas emissions per person since 2006
- 45% less electricity use per capita than the national average

Health benefits for all

By 2025:

- \$8.3 billion cumulative savings in health costs statewide
- 900 fewer premature deaths annually

EDF'S DETECTIVES TARGET ENERGY WASTE



This year, EDF Climate Corps expanded to China, where six fellows found energy savings at companies that included Apple, McDonald's and Cummins. DF Climate Corps pairs MBA and other graduate students—the green business leaders of tomorrow—with businesses, cities and universities, where they hunt for energy savings. In 2014, they found \$130 million in potential savings—equal to avoiding the annual climate pollution of 115,000 cars and some were featured on Showtime's award-winning series *Years of Living Dangerously.* In Chicago, they worked in 25 buildings to help the city address its goal of cutting energy use in large commercial buildings by 20%.

"Most people get an MBA to get into banking. I went the other way—I left banking and got an MBA to promote sustainability."

Gina Melekh, 2014 EDF Climate Corps fellow

A VOICE FOR A NEW GENERATION

One key to climate progress is to engage growing constituencies, including young people, who care deeply about climate but often don't vote. In Colorado, we enlisted climate-action supporters, targeting Millennials (roughly 18 to 33 years of age), asking them to pledge to vote on climate issues. We secured over 125,000 pledges. Many previously voted only in presidential elections. "I haven't been involved in politics before," says Bianca Buium, a student at the University of Colorado in Boulder, "but we can't just ignore this problem or the politicians will, too."

The campaign, called Defend Our Future, deployed a mix of digital and social media strategies, along with traditional grassroots organizing. Our goal is to expand it to a larger, national effort in future election cycles. "Millennials are among those who must live with the most serious consequences of climate change," says Dr. Alicia Kolar Prevost, who is running our nonpartisan initiative.

We're also focusing on Latino audiences. National polling data shows that Latino voters overwhelmingly support action to fight climate change.



Hundreds of thousands, including EDF members, joined the People's Climate March in New York.

THE NEW WORLD OF CLEAN ELECTRICITY

T oday's smartphones are light years ahead of the computers that took us to the moon in 1969—yet our electric power system is on a par with antiquated rotary phones. A big challenge is the U.S. energy system's built-in disincentives to conserve: utilities profit by selling more electricity and building power plants. A tangle of rules impedes innovation. EDF's clean energy program envisions a low-carbon world where homes generate and sell renewable energy and utilities profit by saving customers energy and money. We're putting incentives in place to make this happen.

EDF works in nine states that make up half the U.S. electricity market. In New York, we're helping Governor Andrew Cuomo make the Empire State a model for a resilient energy system. In California, Governor Jerry Brown signed into law an EDF-sponsored bill for demand response, which gives people a financial reward for using less power during times of peak demand. In Texas, we're part of Pecan Street, a living lab for clean energy solutions. As utilities prepare to invest \$2 trillion to replace aging infrastructure in the next two decades, EDF is ensuring the money goes to a clean energy future.



EDF co-founded Pecan Street Inc., in Austin, TX. Participating homeowners save money, and their homes use 38% less electricity on average for cooling, per square foot, than conventional houses.

WHY METHANE MATTERS



Production



Processing

Natural gas is mostly methane, a short-lived but powerful pollutant that accounts for one quarter of the global warming we now experience.
<u>LOOK INSIDE</u> to see how EDF is working to reduce the methane that is leaked and vented along the natural gas supply chain—and helping to protect communities from unacceptable impacts to air, water and health.

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PROGRESS IN COLORADO

Few were talking about the climate impact of methane in 2012 when EDF chief scientist Dr. Steven Hamburg and scientist Dr. Ramon Alvarez co-authored a paper on the subject. We then launched our largest-ever science effort to understand how much methane is emitted along the natural gas supply chain. We've learned there is a huge opportunity to reduce emissions of methane—a greenhouse gas 84 times more potent than CO_2 during its first 20 years in the atmosphere—and slow the rate of climate change in our lifetimes.

With allies like Conservation Colorado, we set our sights on a state where a drilling boom had stirred conflict between industry and communities. EDF president Fred Krupp and our team began meeting with Colorado Gov. John Hickenlooper, who asked EDF to join industry and other groups to craft a solution. Today, the state has the nation's strongest air pollution rules for oil and gas operations and the first direct regulation of methane. How did this happen? Three of the state's biggest producers—Anadarko, Encana and Noble—saw that their social license to operate was at risk. They stepped up.

The rules slash methane emissions by more than 30% and cut air pollution as much as getting all the cars and trucks off the road in Colorado. We're using the rules as a template for federal action and in other states where EDF is fighting to reduce air pollution.

OUR METHANE REDUCTION ST

GET THE FACTS

EDF gathered the needed science to fill the data gaps with 16 peerreviewed field studies involving nearly 100 partners from academia and industry.

"Fred Krupp represents an organization that is fact-based and willing to build alliances."

John Hickenlooper Colorado governor

OUR GOAL: REDUCE METHANE EMISSIONS across the entire natural gas supply chain to 1% OR LESS of total gas produced by 2020





Transmission

Storage

Distribution to Communities

RATEGY

ADVANCE NEXT-GENERATION TECHNOLOGY

EDF has partnered with leading energy and tech companies to develop and apply cutting-edge technologies to detect and monitor methane emissions in real time.

WIN STATE RULES TO CONTROL METHANE AND AIR POLLUTION

Our strategy is to secure strong regulations in states where oil and gas production is most active.

PUSH FOR STRONG FEDERAL REGULATIONS

EDF is leading the fight for urgently needed federal standards that would use Colorado's tough, sensible rules as a model.

Cutting methane emissions in **HALF** would achieve as much climate benefit in the next 20 years as **CLOSING 90 U.S. COAL PLANTS**



INNOVATING WITH GOOGLE EARTH OUTREACH

Two years ago, EDF teamed up with Google Earth Outreach to find, quantify and map natural gas leaks under city streets, using Street View cars. With researchers at Colorado State University, we developed an innovative way to analyze the data we collected, and to validate our findings, we worked with utilities like National Grid. This year, we published interactive maps on edf.org of Boston, Indianapolis and New York City's Staten Island. The resulting national media coverage raised awareness of the climate impacts of leaking methane. We are now mapping our next three cities. Our approach makes pollution visible to the public and provides utilities with a new tool to cut these emissions.

"This project puts information in the hands of people who can make a difference and change the world."

Karin Tuxen-Bettman Program manager for Google Earth Outreach

CHINA DEPLOYS EMISSIONS TRADING TO TACKLE CARBON

C hina burns roughly half the world's coal. This has helped lift the country out of poverty, but at a steep price in terms of air pollution and climate change. EDF is helping the country address those twin dangers by taking important steps toward cleaner energy.

To drive prosperity while reining in emissions, China is harnessing the power of the marketplace. With EDF's involvement, the country has launched emissions trading programs in five cities and two provinces, home to 250 million people. EDF trained more than 1,000 government officials and others on key elements of emissions trading, including verification. China now hopes to launch national emissions trading by 2016 and is aiming for a 17% reduction in carbon intensity from 2010 levels by 2015. The country is on track to meet that goal.

Also in 2014:

 China tightened penalties on polluters, a reform that EDF has advocated for more than a decade. The ceiling on penalties will be scrapped, officials will be held more accountable and citizens will have more power to sue. The reforms, which Reuters called "the most sweeping revisions to the law in 25 years," are modeled on an EDF pilot enforcement project in Chongqing.

 EDF and Shenzhen launched a research project aimed at reducing carbon pollution from the city's vehicles, which have soared from 200,000 to 2.7 million in ten years. The project will incorporate mobile sources into Shenzhen's existing carbon emissions trading program, which was created with help from EDF. The Shenzhen vehicle project was picked as a U.S.-China EcoPartnership by both governments, one of six such projects selected this year.



CUTTING EMISSIONS AROUND THE WORLD

Iobal warming affects everyone and demands an international response. EDF, seeking to reduce emissions and help lay the foundation for future carbon markets, helped launch several initiatives at the 2014 UN Climate Summit.

Halt deforestation

More than 35 national and state governments and 34 corporations pledged to cut deforestation in half by 2020-and end it completely by 2030. With other nonprofits, EDF was a key partner in the coalition that put together this landmark agreement. Deforestation today accounts for 15% of global carbon emissions.

Promote carbon pricing

We helped assemble a coalition of 73 countries and 1,000 companies and nonprofit groups calling for a price on carbon—an approach that EDF supports to cut climate pollution as efficiently and effectively as possible.

Cut methane

EDF, along with six major oil and gas companies and several governmentsincluding France, the UK and the United States—launched an international partnership to reduce methane emissions from oil and gas production.



Elsewhere, EDF helped broker an important agreement between India's largest airline and Indian grassroots groups, making it possible for IndiGo passengers to help offset the carbon footprint of their flights. So far, the program has raised more than \$2 million for low-carbon rural development projects, such as purchasing biogas cookstoves to replace highly polluting wood stoves.

(Top) With EDF's help, Brazil's Kayapo people orchestrated a government operation to stop logging and mining on their land, a territory the size of Pennsylvania. (Bottom) In India, climatefriendly agriculture is helping to alleviate poverty. Thriving oceans, healthy fisheries, prosperous communities "EDF won my trust and cooperation. They understand that sustainability is not just about conserving fish. It's also about families who have been fishing for generations."

Geoff Bettencourt *Fisherman, Half Moon Bay, CA*

RESTORING THE OCEANS TO ABUNDANCE

On a blustery August day, 30 miles off Monterey, CA, Capt. Joe Pennisi hauls up a net and dumps 5,000 pounds of chilipepper rockfish onto the deck. As crew members sort the fish, a biologist records unwanted species and notes their weight—a scant 40 pounds, or less than 1% of the catch. "This is a new day," says Pennisi, a fourth-generation fisherman. "We're totally accountable."

Not long ago, trawl fishermen like Pennisi were blamed for this West Coast fishery's collapse. "I'll never forget the day when I saw a carpet of dead fish as big as a football field," he says. "The culprit was senseless regulations." Back then, if a fisherman caught too many of an overfished species, he was forced to dump the excess in the ocean. "It made me sick," Pennisi says. He lost pride in his job and sold his boat.

But then in 2011, regulators switched the fishery to a catch share model. This approach, which EDF helped develop, gives each boat a percentage of the overall catch. Observers are required on all boats, and if a fisherman catches more than his share, he can buy quota from others, still keeping the total catch within the scientifically determined limit.

"Unlike other management tools, catch shares reward fishermen for conservation," says Shems Jud, EDF's West



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

Amanda Leland

Coast fisheries director. "As the fishery recovers, the value of each share grows."

Fishermen who once fiercely competed now share information to avoid overfished species. That was enough to get Pennisi back on the water. He partnered with EDF to design a light-trawl net that floats above the sea floor, allowing him to cut fuel costs and avoid sensitive habitat. Other fishermen also switched to more selective gear. The result: Pacific

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65% of fish landed by commercial fishermen in U.S.

federal waters are now under catch share management.

Capt. Joe Pennisi *(center)* and his crew. Pennisi is hopeful because he can make a living from the sea while fishing sustainably. "This is a much better system," he says. "We're fishing smarter, not harder." continued from page 24

groundfish stocks are rebuilding, revenue is up and the amount of discarded fish has dropped about 80%.

In August, the Monterey Bay Aquarium upgraded the sustainability rating of 21 of these species of rockfish, sole and other groundfish in its seafood guide. "Fifteen years ago they wrote the obituary for this fishery," says Brad Pettinger, president of the Oregon Trawl Commission. "We're showing we can be good stewards if given the right incentives."



STARTING SMALL, THINKING BIG William K. Bowes, Jr. / EDF donor

f The world's health is important to me," says venture capitalist Bill Bowes, Jr., an EDF trustee who supports our oceans work because of EDF's "rational and results-oriented approach." A prime example of that approach is catch shares—EDF's science-based solution to overfishing. "Fishermen can fish all year and get higher prices, and sure enough the fish population starts to

climb," says Bowes. "Everyone is better off." He praises EDF's strategy of starting small, showing that catch shares work, and then scaling up the idea to the majority of the U.S. catch. "That's what you want—to set a tidal wave going." He adds, "What drew me to EDF was the motto, 'Finding the ways that work.' That's a great message, because EDF really does that."



"EDF finds practical solutions and gets astonishing results."

REFORMING RECREATIONAL FISHING

n the Gulf of Mexico, the commercial catch share program for red snapper, which EDF helped design, has been a huge success. Since the program began in 2007, the red snapper population has rebounded. But recreational fishing, which accounts for half the catch, is not part of the program and is poorly managed, leading to overfishing and large discards of fish. EDF helped win a legal victory requiring improved management.

We also helped launch a two-year pilot catch share program for headboats, or large charter boats, which could be a model for managing recreational fishing. The results are promising, with 20 boats signed up for 2015. Member boats are able to take customers fishing year-round under strict catch limits, while those not in the program were only able to fish nine days in 2014.

"This has been one of our best years ever. We've stayed within our quota, made more money and have been totally sustainable."

Capt. Randy Boggs Pilot program participant Reel Surprise Charters, Orange Beach, AL



REVIVING FISHERIES AROUND THE WORLD







European Union

Overfishing is a global problem, so international engagement is essential. EDF aims to provide practical, science-based advice to governments and partner with local fishermen to help make sustainable fishing the norm in countries that account for nearly two-thirds of the global catch. <u>LOOK INSIDE</u> to see how we're helping turn the tide.

MATT

PRESERVING A WAY OF LIFE IN MEXICO

On the first day of Lent, under a full moon, traditional fishermen head out in the Gulf of California to fish for curvina, a salmon-sized fish native to the area. It's a decades-old ritual that sustains local communities. The fishery is as large as the U.S. red snapper fishery, but overfishing has caused a perennial glut in supply, crashing prices and putting the survival of the species at risk. Historically, fishermen would land thousands of tons of these fish in just a few days.

EDF teamed up with regional organizations to create a catch share program for curvina. By bringing together fishermen, government officials and buyers, the community developed an agreement in which each skiff was granted a per-tide allocation. The result? Fishermen are earning 23% more per pound of fish, and the catch is distributed across the entire



40% OF GLOBAL FISHERIES ARE IN DEEP TROUBLE

season. Catch shares have also reduced the total catch by half, ensuring longterm health of the population. EDF has now been asked by the hake industry to protect their fishery as well.

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SAVING SHARKS IN CUBA

EDF is working with Cuban scientists and fishermen to conduct the first in-depth survey of sharks in Cuba's waters. The research will inform Cuba's national plan of action for sharks, part of EDF's role as a key advisor to Cuban officials on how to safeguard these majestic creatures.



ELY ON FISH RCE OF PROTEIN

BIG PLAYERS, BIG OPPORTUNITIES

Europe's fisheries are in the worst condition of any in the developed world-75% are overfished. But the tide is turning. In 2013, we advised key officials of the European Union as they rewrote its fisheries law, committing Europe to end overfishing. And in 2014, the EU passed legislation to fund policies that will lead to more fish in the water and support communities making the transition to sustainable fishing. We're also working with fishermen in Spain, Sweden and the UK to improve the economic and ecological performance of fisheries. "EDF has a different approach," says Scottish fishing representative John Goodlad. "They seek solutions that chime with fishermen."





35 million PEOPLE MAKE THEIR LIVING IN SMALL-SCALE FISHERIES



LOCAL ACTION: KEY TO GLOBAL RECOVERY

Nearly half the fish people eat are caught in small-scale fisheries, many of which are unmanaged and in serious trouble. EDF is partnering with UC Santa Barbara and Rare, a global leader in community-led conservation, in a collaboration called Fish Forever. Together we are providing fishermen with practical solutions to reverse overfishing, and are engaged in the Philippines and Indonesia as well as Belize, Brazil and Mozambique.



"The best way to revive oceans is to empower fishermen with rights, responsibilities and rewards."

> Dr. Laura Rodriguez Oceans deputy director EDF de México

The case for a new conservation economy

"There's no doubt in my mind we'll substantially reduce fertilizer as a pollutant in American agriculture *and* save farmers money. Our partnership with EDF gives us a platform to do that."

Matt Carstens Vice President, United Suppliers

FARMERS AND RETAILERS TAKE ON FERTILIZER POLLUTION

n the summer of 2014, half a million residents of Toledo, OH, woke up to find their tap water unfit to drink. The cause? Poisonous cyanobacteria created by excess farm fertilizer polluting Lake Erie and other waters. With lakes across the country registering a rise of algae blooms driven by fertilizer, the same crisis could easily unfold in other cities. Fertilizer not absorbed by crops also can form nitrous oxide, a greenhouse gas 300 times more powerful than carbon dioxide.

EDF has partnered with farmers for years to cut fertilizer loss, advancing techniques to improve the rate and timing of fertilizer application and promoting natural filters such as wetlands to keep fertilizer out of rivers. As a result, farms on half a million acres have cut fertilizer loss by an average of 25%—all while maintaining yields.

Of course that's only a small fraction of U.S. farmland, so we set out to scale up this successful approach. The quickest way to do so is by harnessing the U.S. grain supply chain. EDF helped secure a commitment from Walmart to reduce 20 million metric tons of greenhouse gases from its supply chain by 2015. To help meet that goal, the company is requiring its suppliers to create fertilizer efficiency plans. Food companies including Campbell's Soup, General Mills and Smithfield asked EDF to help them implement such plans, and this year 15 major Walmart suppliers, representing 30% of all North American food and beverage sales, began to launch fertilizer efficiency programs. To help farmers change long-held practices, EDF has partnered with United Suppliers (USI), an agricultural supply company, to create a fertilizer program that the company will implement through its members, who advise farmers managing 45 million acres. "When I heard there was going to be a meeting with EDF, I said, 'This can't be

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"Farmers could become stewards of clean water, fresh air and healthy climate. They will need to be, if our planet is to sustain a growing population."

David Festa VP Ecosystems


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good," recalls USI vice president Matt Carstens. "Instead, EDF reached out and said, 'Let's work together.' It became clear we all wanted the same thing—to keep fertilizer out of lakes and rivers. So we dropped our weapons and went to work."

EDF's focus is on corn, the biggest source of excess fertilizer. The goal is to improve fertilizer efficiency on 50% of corn acres by 2020. "EDF put it all together," says Carstens. "They worked on every aspect of the project, from developing the tools to education to accountability."



"Efficient fertilizer practices make great business sense. Growers are better off. And so is the environment."

Bill Couser, Iowa farmer and EDF partner

A LEGACY OF COOPERATION Dr. Susan Harris / EDF donor

C onsultant and author Susan Harris believes people can change the world for the better—and trusts EDF to help lead the way. "We make progress by engaging all players, not by excluding stakeholders with whom we might disagree," she says, citing EDF's work with farmers and agricultural businesses to cut fertilizer runoff. "EDF is ahead of the curve in enlisting business to help

solve problems." Harris's commitment to sustainability runs deep; she participated in the first Earth Day in 1970. "The more I grasped the complexity of systems," she says, "the more I appreciated EDF's holistic approach." As an Osprey Legacy donor, Harris has made a gift to EDF in her will. "I'm an optimist—and EDF is about tackling real problems in ways that work now and into the future."

"EDF is brilliant at bringing everyone to the table and getting the best outcome for all."



A RIVER RUNS FREE

W ith water in the West chronically overallocated, EDF is engaging stakeholders to adopt flexible water management.

For almost half a century, the Colorado River has rarely run its full course to Mexico's Gulf of California. But in 2014, it did, thanks to a deal EDF helped broker. A "pulse flow" of water, designed to mimic spring floods, was released into the dry riverbed. It's now providing scientists with clues on how to revitalize the delta. Smaller releases are planned for the next two years.

The water came back because the United States and Mexico came together to share water, benefiting farmers as well as communities and wildlife. Delta inhabitants celebrated the return of the river with brass bands.

"We're relishing this moment. Our partnership with Mexico is a model for binational cooperation on sharing rivers and adapting to climate change."

Michael Connor U.S. Deputy Secretary of the Interior



HELPING RARE WILDLIFE SURVIVE IN OIL AND GAS COUNTRY

Despite decades of effort, existing tools to protect America's rarest animals are not saving habitat fast enough to restore healthy populations. As many as 91 species of birds including the whooping crane—are threatened with extinction. The key to recovery for many of these species lies with America's private farm, ranch and forest landowners who manage twothirds of our nation's land. EDF has created powerful incentives for these landowners to embrace conservation

without onerous regulations. With EDF habitat exchanges, landowners are paid to maintain and improve habitat. The payments come from energy companies required to mitigate the damage they cause to lesser-quality habitat. Nowhere is the urgency to save species greater than in the 16 Western states where two iconic rangeland birds, the greater sage-grouse and lesser prairie-chicken, nest in sagebrush and grasslands. The birds' shrinking habitat is home to the

"Ranchers now want to raise birds as well as cows. We need to keep our youth on the land."

Terry Fankhauser *Vice President, Colorado Cattlemen's Association*



region's largest economic engines ranching and energy development. In 2014, the U.S. Fish and Wildlife Service listed the prairie-chicken as threatened under the Endangered Species Act. Now the agency faces a 2015 deadline to decide if the sage-grouse is to be similarly protected. Federal listing could severely crimp energy production and ranching across many states and trigger prolonged court battles with an uncertain outcome for the bird.

EDF is working to recover the prairiechicken by establishing a habitat exchange in the Great Plains. Similar efforts are under way for the sage-grouse in Colorado and Wyoming. We'll then expand our model to other states. Scientists will measure and verify the conservation actions taken, so we can ensure wildlife receives benefits in excess of impact. A company that degrades habitat will need to buy enough habitat credits to more than compensate for the harm it causes.

"This is the first systemic approach to conservation," says EDF scientist Ted Toombs, who's helping write the operations manual for the exchanges. "We realized piecemeal conservation wasn't saving species." The approach



Once numbering in the millions, the lesser prairie-chicken, known for its colorful courtship display, has declined more than 90% and survives on mere remnants of its historic range.

builds on EDF's successful program in the Texas Hill Country that aided the endangered golden-cheeked warbler in its Texas breeding grounds. Ranchers were paid by the Fort Hood Army base, and a rare bird became a valuable asset to nurture, like any other crop.

"By far the best feature of a habitat exchange is its collaborative nature," says Colorado rancher T. Wright Dickinson. "We all realize the status quo



wasn't working. EDF came along at the right time. They put an end to the conflict industry that had accomplished little actual conservation."

Working with our partners to get toxic chemicals out of consumer products

"It is far wiser and less expensive to prevent exposure to unsafe chemicals and air pollution than to have to treat the serious health problems that they can cause."

Dr. Lynn Goldman

EDF Trustee; Dean, Milken Institute School of Public Health, The George Washington University

GUIDING WALMART TOWARD SAFER PRODUCTS

W ith the need for chemical safety reform growing increasingly urgent, EDF turned to the world's largest retailer to help place safer products on America's shelves.

In 2014, Walmart rolled out a policy developed with EDF the previous year to phase out potentially harmful ingredients from tens of thousands of products shampoos, body lotions, cosmetics and more—in its U.S. stores, which serve 140 million customers weekly.

Most chemicals have never been tested for possible health impacts, even as research shows that babies in the womb typically carry dozens of toxic chemicals



and pollutants in their bodies. No wonder consumers are demanding change.

Walmart used a software program we helped develop to assess chemicals in formulated products. The results were disturbing: nearly 40% of Walmart's assessed products contained chemicals that may pose health risks. Walmart asked EDF to help create a policy for its suppliers to replace these chemicals.

With chemists and toxicologists, we prioritized chemicals according to their hazard, prevalence in products and potential for human exposure. Walmart then targeted a short list of chemicals of concern to remove from its products.

"Pollution and toxic chemicals take a serious toll on our health. We owe it to our children to ensure the safety of chemicals and to significantly reduce the pollution that harms their health."

Dr. Sarah Vogel Health program director Under the policy, Walmart suppliers must show that newly added chemicals are safer than those they replace. Suppliers also must disclose all ingredients in their products by 2015. "Everybody must be transparent by January 1," says Michelle Harvey, EDF's supply chain director. "If not, they're threatening a very important business relationship."

With Walmart's unparalleled purchasing power, its policy will inevitably drive

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Dozens of toxic chemicals and pollutants are typically present in babies in the womb.

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change throughout the \$250 billion global personal care and household products industry. We're already seeing ripple effects: Target and CVS have announced their own chemicals programs this year. "These actions show that what's good for people and the environment is also good for business," says EDF VP of corporate partnerships Tom Murray.

Note: EDF accepts no funding from Walmart or any other corporate partners, or from their corporate foundations. We do accept funding from private foundations and from individuals.



A MORAL IMPERATIVE Angela and David Filo / EDF donors

or Angela Filo, a photographer and mother of two young daughters, chemical safety is a moral imperative: "We don't know what we're exposing our children and families to." Filo and her husband David, co-founder of Yahoo, support EDF's efforts to remove chemicals of concern from consumer products and replace them with safer substitutes.

"We look to EDF to be a watchdog for children and families and to grow awareness of this critical but overlooked issue," she says. The Filos, who support EDF through their Yellow Chair Foundation, also admire the strategy of working with key corporations to change their chemicals policies. "We found in EDF a trusted partner who looks after the broader health of the community."

"EDF brings to bear the science, integrity and legal expertise that drive progress through corporate channels." Angela Filo



BECAUSE VOLUNTARY ACTION WILL NOT BE ENOUGH, A PUSH FOR STRONG REGULATION

The Toxic Substances Control Act (TSCA) makes it so difficult to prove harm from a chemical that, since TSCA was passed in 1976, companies have only had to test about 3% of the 85,000 chemicals available for commercial use.

In 2014, the need to reform this federal law was vividly demonstrated when a chemical spill near Charleston, WV, left 300,000 people without drinking water. Public officials could find virtually no hazard data on the spilled chemical, despite the fact that the coal industry has used it for years.

EDF scientist Dr. Richard Denison linked the problem to outdated regulations and questioned the government's assurances of safety given to Charleston residents. In Washington, he advised legislators in making hundreds of improvements to proposed TSCA reform legislation.

Meanwhile, EPA issued its first final risk assessments under TSCA in 28 years, finding that two commonplace chemicals pose unacceptably high risks to workers and the public. EDF is pushing the agency to institute safety measures for the chemicals.



Potentially dangerous chemicals that spilled from these storage tanks on the Elk River outside Charleston, WV, affected the drinking water of 300,000 people. Yet due to a lack of regulation, virtually no data were available to health officials who dealt with the tragedy.

EDF FIGHTS EVERY DAY FOR CLEAN AIR AND WATER

DF was a strong voice for public health when many of the nation's clear air rules were written. Through science, advocacy and the courts, we're defending existing standards and closing the remaining loopholes that expose Americans to harmful pollution.

A legal team on the front lines

When industry groups challenge bedrock protections, EDF fights back. In 2014 we won important victories:

 In April, the Supreme Court upheld EPA rules which will reduce air pollution that drifts across state lines and causes unhealthy soot and smog in Eastern states. EDF was a party to this case and was instrumental in advocating and defending the new rules.

- Also in April, a federal appeals court rejected a coal lobby challenge to a 2012 rule lowering mercury emissions from power plants. Mercury is highly toxic and linked to brain damage in children. EDF defended the standards, which represent one of the biggest public health advances in a generation.
- The Supreme Court denied an industry petition to throw out California's



Mercury in its most toxic form is found in many waterways and fish. EDF attorneys in 2014 successfully defended new standards that will eliminate up to 90% of mercury emissions from power plants.



low-carbon fuel standard, which cuts climate pollution from transportation fuels. EDF was a party to the case, and co-sponsored the landmark California greenhouse gas law.

Clean transportation

Following decades of work by EDF to make cars and trucks cleaner, EPA issued a rule which will significantly cut the sulfur content of gasoline. The proposed rule, Tier 3, will dramatically reduce smog, soot and air toxics, saving thousands of lives every year.

Efforts in low-income communities

Too often, the right to breathe clean air has been denied to people in low-income communities. In Houston, for example, the port abuts low-income neighborhoods. More than one-third of the port's air pollution comes from heavy, dieselfueled trucks, so EDF created a program that helps truckers buy cleaner trucks.

The effort will lead to a dramatic reduction in trucks' diesel emissions, including fine soot and smog-forming nitrogen oxides. Both pollutants have been linked to asthma and respiratory illnesses, and smog is especially harmful to active children. The program is now a model for other ports around the country.



FINANCIAL OVERVIEW

Environmental Defense Fund's work entails a lasting commitment to preserve natural systems on which life and livelihoods depend. We must maintain the financial strength needed to fund this long-term effort.

EDF continued to grow during fiscal 2014, as total operating expenses reached \$134 million, an 11% increase over fiscal 2013. Support and revenue of \$152 million in fiscal 2014 showed significant fundraising strength. Although the total was similar to fiscal 2013, that prior year included a single foundation gift providing \$70 million of new multiyear funding. (Nonprofit accounting principles require us to record income in the year funds are raised, not in the year designated for use.)

In fiscal 2014, non-foundation funding increased 44%, with more than half of total support and revenue coming from individual contributions and membership.

Program spending in fiscal 2014 was 84% of total expenditures. Development represented 7% of expenses, while management and administration was 6%. Membership and new member acquisition totaled 3%.

Over the past four years, EDF's net assets have grown more than 50% to \$212 million, providing a strong financial foundation as we embark on the ambitious goals of Blueprint 2020, our strategic plan for the next five years.

We are thankful for your support and realize that as more donors recognize EDF's innovative program work, we have an ongoing responsibility to steward your investment well, while delivering strong results for the environment and human health.

Cynthia Hallenbeck *Chief Financial Officer*

Total program and supporting services expenses

In millions of dollars



Sources of support and revenue



Expenses



STATEMENT OF ACTIVITIES

YEAR ENDED SEPTEMBER 30	UNRESTRICTED	RESTRICTED	TOTAL 2014	TOTAL 2013
OPERATING SUPPORT AND REVENUE				
Support:	• • • • • • • • • • • • • • • • • • • •		•••••••••••••••••••••••••••••••••••••••	
Contributions and membership	\$ 19,509,552	\$ 61,894,005	\$ 81,403,557	\$ 53,251,365
Foundations and other institutional giving	2,593,625	58,380,468	60,974,093	90,118,102
Government and other grants	75,664	3,281,057	3,356,721	3,934,539
Bequests and other planned giving	3,360,690	-	3,360,690	3,226,392
Total support	25,539,531	123,555,530	149,095,061	150,530,398
Revenue:	• • • • • • • • • • • • • • • • • • • •		•••••••••••••••••••••••••••••••••••••••	
Investment income allocated for operations	2,232,321	245,216	2,477,537	2,283,394
Fees, royalties and other income	670,794	-	670,794	736,037
Total revenue	2,903,115	245,216	3,148,331	3,019,431
Net assets released from restrictions	108,553,162	(108,553,162)	-	_
Total support and revenue	136,995,808	15,247,584	152,243,392	153,549,829
EXPENSES				
Program services:	••••••			• • • • • • • • • • • • • • • • • • • •
Climate & Energy	60,419,668	-	60,419,668	47,094,107
Oceans	21,190,430	-	21,190,430	21,070,263
Ecosystems	18,941,562	-	18,941,562	18,981,854
Health	5,937,427	-	5,937,427	7,266,384
Education	5,381,835	-	5,381,835	4,880,117
Membership activities	1,061,942	-	1,061,942	1,935,892
Total program services	112,932,864	-	112,932,864	101,228,617
Supporting services:				
Management and administration	8,296,709	-	8,296,709	7,419,937
New member acquisition	509,583	-	509,583	375,856
Fundraising:				
Membership	2,466,492	-	2,466,492	2,670,468
Development	9,791,106	-	9,791,106	8,802,754
Total supporting services	21,063,890	-	21,063,890	19,269,015
Total operating expenses	133,996,754	-	133,996,754	120,497,632
Change in net assets from operations	2,999,054	15,247,584	18,246,638	33,052,197
Other expenses, net of contributions and other income	(64,563)	13,368	(51,195)	92,501
Investment results, net of allocation to operations	(46,376)	1,246,334	1,199,958	2,402,593
Change in net assets	2,888,115	16,507,286	19,395,401	35,547,291
Net assets, beginning of year	44,470,352	147,661,446	192,131,798	156,584,507
Net assets, end of year	\$ 47,358,467	\$164,168,732	\$211,527,199	\$192,131,798

This statement of activities represents the consolidated activities of Environmental Defense Fund, Incorporated, EDF Action and California Fisheries Fund, Inc. Copies of the complete audited financial statements are available upon request or at edf.org/audit.

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EDF mourns the loss of two of our longtime trustees, James W. B. Benkard and Robert W. Wilson, who passed away during the last year.

Jim Benkard, an attorney known for his pro bono representation of defendants in death penalty cases, served on the board for more than 30 years. As chair of the board's litigation committee, he mentored a generation of EDF staff attorneys and led us to landmark legal victories.

Bob Wilson, a legendary investor and passionate environmentalist, made his first donation to EDF in 1970, in response to a *New York Times* advertisement. He served on the board for 25 years, and his generous challenge grants helped build EDF and inspired thousands to become supporters.

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