

Annual Report 2017

Finding the ways since 1967

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.

On the cover The magnificent osprey, whose survival was once threatened by the pesticide DDT, has made a dramatic recovery thanks to EDF's work (see p. 3).

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Please share this report with others and invite them to join you in supporting our work.

Progress, despite the storm

Anti-environmental assaults in Washington made 2017 the most challenging year in EDF's 50-year history. Thankfully, our members and friends have been more engaged than ever, contacting Congress and others more than 1.6 million times—once every 19 seconds—and contributing generously to a record level of program expenditures in defense of America's bedrock environmental values. We thank you.

With progress blocked in the nation's capital, EDF found other ways to advance our goals. For example, we helped California, China and Walmart move forward as climate leaders, employed new technologies to safeguard people from health risks, continued to revive ocean fisheries around the globe, and aligned incentives for farmers and ranchers to help protect clean water and wildlife habitat.

A half-century ago, EDF's founders could not have imagined the role their fledgling organization would come to play in addressing these critical challenges of the 21st century. While we cannot know all that the next 50 years will bring, we are confident that, with your help, EDF will continue to be a central force for defending the environment and human health. We are ever grateful for your trust and support.



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Fred Krupp

Diane Regas Executive Director

Fred Krupp President

Carl Ferenbach Chairman

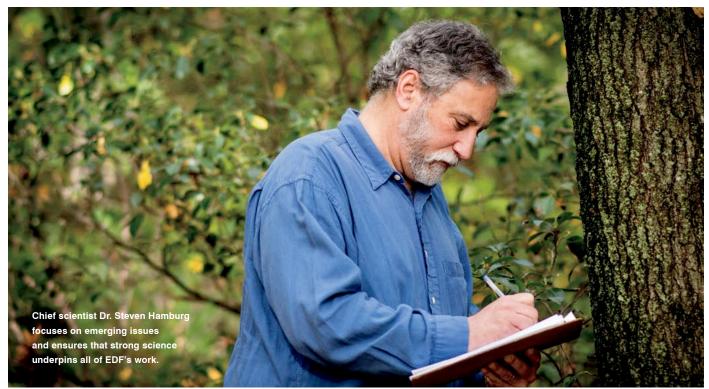
50 years of finding the ways that work





"EDF helped lay the foundation for today's bedrock environmental laws. We know how to defend them."

Vickie Patton General Counsel



Fifty years ago, eight scientists and a lawyer met on Long Island, NY, to sign papers establishing a new kind of environmental group. Some were ornithologists, with strong evidence that the pesticide DDT was causing the eggshells of ospreys to crack. Their novel idea was to go to court to save America's birds of prey. And they succeeded beyond their wildest dreams, winning a series of legal decisions that led to a nationwide ban on DDT in 1972. Thanks to their work, the U.S. osprey population grew to an estimated 310,000 birds by 2016, more than triple the number in 1970, and bald eagles rebounded from 15,000 to 143,000.

What the scientists couldn't have known was that the organization they launched

that day, Environmental Defense Fund, would remain in the vanguard of environmental advocacy for the next half century. By combining the rigor of the scientific method, the insights of economics and the force of law, EDF has amassed a remarkable record of results (see p. 8).

The founding scientists, two of whom are still EDF trustees, helped usher in the



"Because market forces can either hurt or help the natural world,
EDF works to get the incentives right to reward conservation."

Dr. Frank Convery Chief Economist

Second Wave of environmentalism, when litigation and regulation addressed the air and water pollution plaguing mid-20th century America. (The First Wave began at the turn of the century, when President Theodore Roosevelt created 230 million acres of national parks and reserves.)

In the 1980s, EDF helped usher in the Third Wave, a strategy that built on the



strengths of the first two waves, while addressing their limitations. This new approach tackled more than just the immediate causes of environmental degradation. It delivered solutions to the underlying problems.

Third Wave practitioners, wrote EDF President Fred Krupp in 1986, "recognize that behind the waste dumps and dams and power plants and pesticides that threaten major environmental harm, there are nearly always legitimate social needs—and that long-term solutions lie in finding alternative ways to meet those underlying needs." This meant cooperation, bipartisanship and unlikely partnerships, as well as innovative policies that harnessed the power of markets to drive environmental progress.





"The nature of corporate partnerships is changing for the better. We're setting more aggressive goals and influencing entire industries."

Tom Murray VP EDF+Business

That was controversial thinking at the time—but it proved so effective that many other environmental groups eventually tried similar approaches.

The world has reached a perilous moment. The Trump administration is rolling back environmental safeguards even as the impacts of climate change drive home the need for urgent action. Fortunately, an emerging Fourth Wave of environmentalism can help deliver change at the pace and scale we need, by using technological innovation to give people new ways to measure pollution, analyze data and take action. You'll see examples of this throughout our report.

In response to the administration's assault, men and women around the

world are affirming that environmental values are human values. States, cities, corporations and nations are all stepping up. This report shares some of the ways EDF is helping them advance the cause.

As we move with clear-eyed confidence into our second half-century defending the environment, we thank you for your steadfast support.

Shaping political leadership

In the heat of the 2016 campaign, Donald Trump vowed to dismantle the Environmental Protection Agency (EPA), leaving behind only "little tidbits." Once in office, he appointed an extreme foe of the environment, Oklahoma attorney general Scott Pruitt, as head of EPA. Pruitt quickly began trying to roll back public health safeguards.

In response, EDF deployed two powerful weapons: our millions of supporters and our political partner, EDF Action.

EDF Action works with both parties to defend critical environmental protections at the federal and state levels. Unlike EDF itself, EDF Action can engage in extensive lobbying, giving us more political muscle to take on well-funded opponents. The administration's attack on core environmental values triggered a historic response. EDF membership surged past two million, our Moms Clean Air Force affiliate is now an additional one million strong, and our outreach to millennials, Latinos and conservatives has gained momentum. These voices are helping us fight back—and laying the groundwork for renewed political power.

EDF Action has won important victories. In a dramatic Senate vote in May 2017, we preserved national limits on methane leaks from oil and gas operations on public lands, protecting the climate from this powerful greenhouse gas.

We and our allies also prevailed in a House vote on an amendment that would have barred the Defense Department from preparing for climate change something the Pentagon calls a "threat multiplier." EDF Action had only 12 hours' notice that the vote was coming, but we succeeded in assembling a coalition that included 46 moderate Republican supporters.



In 2017, threats to the environment and public health inspired millions to get involved. Moms Clean Air Force, an EDF affiliate, is an influential voice on Capitol Hill, meeting with leaders such as Senator Lamar Alexander (R-TN).

EDF Action fights policies that threaten the environment, while driving progress in the states and in Washington, DC.

Standing up in court

In Washington, the administration's destructive environmental agenda is in full swing. But EDF's deep bench of attorneys is working to stop the onslaught.

With EPA's leadership operating in secrecy, EDF filed a Freedom of Information Act request to see EPA Administrator Scott Pruitt's schedule. Pruitt finally released the schedule in September, revealing that he met regularly with executives from mining, fossil fuel and auto industries, sometimes shortly before making decisions that put their interests above those of the American people.

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In June, Pruitt suspended methane standards for new and modified oil and gas facilities, dealing a severe blow to climate action. EDF, together with other health and environmental groups, filed suit, requesting an emergency stay to block the decision. A federal appeals court struck down Pruitt's decision and the standards are now in full effect nationwide.

Then, when Pruitt sought to suspend implementation of tighter limits on ground-level ozone, or smog, EDF and 16 state attorneys general sued—and Pruitt reversed course. Unfortunately, some 115 million Americans still breathe air with unhealthy levels of smog.

EDF and allies successfully challenged efforts by the Department of the Interior to suspend vital methane standards on oil and gas facilities on public and tribal lands. We also defended the right of states to pursue clean energy. Three victories over industry challenges in New York, Connecticut and Illinois have kept clean energy efforts there on track.

"EPA has undergone the government equivalent of a hostile takeover," says our general counsel Vickie Patton. "But EDF has shown that it can fight and win."

Celebrating

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Why EDF matters

"EDF emphasizes poverty alleviation, dealing with climate change and low-carbon development, which are the highest priorities for China."

Lin Erda

Member of Chinese People's Political Consultative Congress

"Frankly, if EDF had not been at the table, we would still have a broken law, and we might still be decades away from reform."

Senator Tom Udall (D-NM) on the 2016 passage of the Lautenberg Chemical Safety Act

"By promoting agricultural reform and partnering with landowners to protect habitat, EDF is helping us all."

Barbara Kingsolver

"Environmental Defense Fund is probably the best nonprofit to find the intersection between profit and planet."

Bob Langert

Former Senior Director of Social Responsibility, McDonald's

Founded in 1967, EDF has been been using science, law, economics and partnerships to drive positive change ever since.

Explore videos and photos of EDF victories at edf.org/50years

A half-century of achievement

For 50 years, EDF has worked with a broad array of partners to help drive remarkable environmental progress.

1979 EDF successfully calls for a ban on **cancer-causing asbestos** in hair dryers.

1977 Our lawsuit prompts new U.S. tuna fishing rules that help **cut dolphin deaths** in the Pacific Ocean by 90%.

1972 EDF lawsuit results in a U.S. **ban on DDT**, leading to recovery of the bald eagle, osprey and other birds of prey.

1967 A small group of scientists and an attorney gather on Long Island to incorporate Environmental Defense Fund. **1974** Our Mississippi River study leads to the **Safe Drinking Water Act**, the first national health standards for water.

1977 An EDF campaign

hazardous flame retardant

TRIS in children's sleepwear.

results in a ban on the

1985 Along with NRDC, we help convince regulators to **phase out leaded gasoline**, linked to toxic blood lead levels in children.

1987 EDF helps get special devices on shrimp trawls to **reduce sea turtle drownings**.

1990 EDF's partnership with **McDonald's** eliminates 300 million pounds of packaging waste over ten years. Other restaurants follow suit.

1987 EDF begins a 30-year effort to reduce the rate of **Amazon deforestation**, which has dropped 70% in Brazil. **1995** Groups including EDF help bring back **gray wolves** to much of their historic range in Idaho and Wyoming. **1995** Our Safe Harbor initiative gives landowners incentives to save **endangered species**. Four million acres have been enrolled.

2000 Our **Seafood Selector** guide provides millions of Americans with information on ocean-friendly seafood.

1994 In EDF v. City of Chicago, the Supreme Court rules ash produced by municipal **waste incinerators** is not exempt from regulation. **2004** EDF partners with FedEx to develop a **hybrid electric delivery truck**—one that emits 90% less soot than the standard truck.

Express

1990 The Clean Air Act's **acid rain program** helps cut SO₂ pollution—85% to date—using EDF's cap-and-trade approach. **1998** The **EDF Chemical Scorecard**, an online information database, shows maps of pollution sources in communities. **2005** EDF works with Smithfield Foods to unveil a first-of-itskind purchasing policy to **curb antibiotic use** in hog production. **2006** Following efforts by EDF, the Northwestern Hawaiian Islands become the world's **largest marine reserve**.

TEXAS

2007 EDF launches **Climate Corps**, which places graduate students in companies to save energy; \$1.5 billion in savings have been identified.

2007 In Texas, EDF leads a successful fight to thwart energy giant TXU's effort to fast-track 11 **dirty coal plants**.

2009 We partner with Texas ranchers on our first **habitat exchange**, helping boost the known population of goldencheeked warblers by 50%.

2007 The Gulf of Mexico adopts our **fishing rights program** for red snapper. Today, the Gulf snapper population has tripled.

2006 In California, the **Global Warming Solutions Act**, cosponsored by EDF, sets the stage for transition to low-carbon future. **2007** The **U.S. Supreme Court rules** that EPA can and must regulate global warming pollution, siding with EDF and its allies.

2009 Our alliance with Walmart establishes new greenhouse gas goals for the company and its **100,000 suppliers**.

> **2011** EDF works with New York City to phase out the **dirtiest heating oils**, helping cut ambient levels of SO₂ pollution by 70%.

Walmarta

2012 EPA finalizes **new mercury rules**, following our advocacy. They sharply limit emissions of the neurotoxin from power plants.

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2014 In Colorado, EDF helps establish rules that will **reduce methane emissions** from oil and gas operations by 25–30%. **2016** EDF helps pass the **Lautenberg Chemical Safety Act**, the most important environmental law in a generation.

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2017 California and China

deepen their commitment to

approach pioneered by EDF.

climate action, using a market

2013 In partnership with EDF, Walmart pledges to **reduce toxic chemicals** in goods it sells, affecting 90,000 products.

2012 After the **BP oil disaster**, EDF helps pass the RESTORE Act, directing 80% of BP's civil penalties to coastal restoration. **2016** EDF helps Belize become the first country to implement secure fishing rights nationwide, a **model for small-scale fisheries**.

CINATE

EDF's vision is to turn the corner toward a safe and stable climate by rapidly reducing greenhouse gas emissions and accelerating the transition to a healthy, prosperous clean-energy economy.



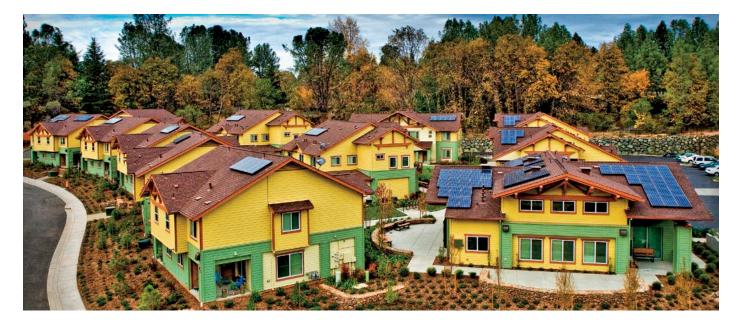
Led by California, states take the reins on climate

TIME



"We have created a model for the world, and EDF was an instrumental partner in this effort."

Eduardo Garcia California State Assemblyman



With the Trump administration shifting into reverse gear on federal climate action, EDF has helped California, Illinois and other states take the lead on climate, sending a strong signal to the nation and the world.

The California legislature voted in July 2017 to extend the state's cap-and-trade program, which had been set to end in 2020. The declining cap guarantees emissions reductions and is a central component of the state's bold plan to reduce planet-warming emissions 40% below 1990 levels by 2030.

EDF has been working with California leaders for more than a decade. In 2006, we cosponsored the landmark Global Warming Solutions Act, which set an economy-wide limit on greenhouse gas emissions, spurring innovation.

The renewed commitment, along with a companion bill to address local pollution, passed by a two-thirds majority in the state legislature, enough to avoid legal challenges. "This success demonstrates it is possible to strike a balance between environmental, economic and health







"The world's economies are already showing that they can grow and decarbonize at the same time."

Gwen Ruta Senior VP Climate and Energy

concerns while ensuring equity for communities disproportionately impacted by pollution," says the bill's sponsor, assemblyman Eduardo Garcia. "We have created a model for the world, and EDF was an instrumental partner."

At least 35% of the proceeds from capand-trade will finance programs such as transportation and renewable energy in disadvantaged and low-income areas.

The Golden State has proven that the excuse so often given for doing nothing on climate change—that climate action slows economic growth—is simply false. As it reduced emissions, the state grew its economy, adding jobs almost four times faster than the national average. California is charting a path that other states, many of them under Republican leadership, are now following.

In Illinois, EDF helped win passage of an ambitious bipartisan bill that will reduce power plant carbon emissions by more than half by 2030, while generating \$15 billion of investment in wind and solar. Meanwhile, the nine Northeastern states that are part of a regional cap-and-

On the front lines



CA The state extended its landmark cap-and-trade program, which we helped develop, placing limits on carbon pollution and creating tools to improve air quality in communities.

CO Working with EDF, some utilities have switched to renewables, and the state passed rules to limit methane emissions from oil and gas operations.

IL EDF and its 70,000 members in the state helped pass a landmark, bipartisan clean energy jobs bill—the most significant in the state's history.

NY Regulators approved new rules so utilities can earn money by cutting climate pollution, not just by selling more electricity.

NC Legislation passed that will more than double renewable energy capacity. The bill would not have passed without EDF's defense of the state's clean energy policies.

OH We helped negotiate a settlement with American Electric Power that will lower pollution and result in 900 megawatts of new, renewable energy.

trade program called RGGI have reduced carbon from power plants by 40% since 2008, and will cut 30% more by 2030.

"Climate action has its own momentum," says Quentin Foster, EDF's California climate director. "The administration can throw sand in the gears, but it can't stop climate action. States, cities and businesses are all stepping up."



LEADING THE WAY

When acid rain was harming forests and lakes in 1990, EDF designed a cap-andtrade program that spurred innovation and helped cut sulfur dioxide pollution 85% at a fraction of the projected cost. China saw the program's success and invited EDF to advise there, leading to the opening of our Beijing office.

New inventions uncover invisible methane leaks the the the the

At least a quarter of today's global warming is driven by human-caused emissions of methane, a highly potent greenhouse gas. The oil and gas industry is the single-largest U.S. industrial source of methane pollution, but how much is actually leaking was unknown until EDF brought together 150 scientists from 40 institutions to publish 34 peer-reviewed papers on the U.S. natural gas system. The studies revealed leakage much higher than EPA estimates and led to the first national methane standards.

To detect leaks quickly, industry needed a way to monitor facilities around the clock. So EDF challenged inventors to develop detectors that react swiftly. One solution: solar-powered laser systems that upload data to a cloud server. "We can now address fugitive methane in real time, not weeks or months," says Andrea Carolina Machado Miguens of Statoil, the first producer to use the systems. PG&E and Shell also plan to adopt them. Our next frontier? Mobile devices that can rapidly survey many facilities. EDF is partnering with Stanford University to test promising technologies.



"The path toward climate stability and the path out of poverty have to be the same."

Dr. Zhang Jianyu China Managing Director

How China stepped up as a global climate leader The road to a global climate solution leads through China, the world's largest greenhouse gas emitter. With the United States exiting from the Paris climate agreement, China has filled the void by demonstrating impressive leadership.

Twenty-five years ago, Beijing called on EDF to help guide the country's first pilot projects using economic incentives to reduce pollution. Later we provided technical assistance as China launched seven carbon trading pilot programs. Their success inspired Beijing to announce it would begin phasing in a national emissions trading system (ETS). When the first phase of the ETS is fully implemented, it is expected to cover roughly a third of the nation's total emissions. We expect additional sectors to be covered as the ETS expands in years to come.

"EDF is helping China develop infrastructure and policies needed to shift the economy toward a low-carbon future," says our China managing director Dr. Zhang Jianyu.

The transition is being overseen by a new generation of environmental enforcement officers, more than 39,000 of them trained through a program EDF established with leading universities. Our goal: to see China's carbon emissions peak by 2025, five years ahead of its Paris commitment.

To a gigaton and beyond

EDF continued to call on major corporations to lead on climate in 2017. In April, our 11-year collaboration with Walmart resulted in the launch of Project Gigaton, an unprecedented pledge from the world's biggest retailer to shrink its supply chain greenhouse gas emissions by one billion tons by 2030, more than Germany emits in a year. This ambitious goal engages Walmart's more than 100,000 suppliers and sets a bold new bar for companies across the globe. From joint efforts with Midwestern crop advisors to partnerships with major Walmart suppliers such as Campbell Soup Company and Smithfield Foods, EDF is helping to focus efforts on five areas that hold the potential for the largest emissions reductions.

AGRICULTURE

EDF's science-based strategies show farmers the path to more efficient fertilizer use on more than 20 million acres of cropland, preventing up to half of the fertilizer from ending up in local waterways and the air.

> Why? Fertilizer escapes into the air as nitrous oxide, a potent greenhouse gas.

FOOD WASTE

EDF's online toolkit can help farmers reduce on-farm food waste. Our study of waste on the farms of some of Walmart's biggest suppliers will inform the company's policy.

> Why? 10 million tons of food is discarded or left unharvested on U.S. farms annually.

PRODUCT DESIGN AND USE

EDF experts are examining the life cycle of products such as computers and home appliances from raw materials through use and disposalto spot potential pollution reductions.

> Why? Global production and use of all consumer products accounts for 60% of the world's carbon emissions.

FREIGHT

EDF is helping to steer businesses toward cleaner, leaner distribution through streamlined networks, cleaner fuels and switching from road to rail. Why? Freight accounts for 16% of all U.S. corporate greenhouse gas emissions.

DEFORESTATION

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Working with nonprofits on the ground, EDF is exploring how businesses that buy beef and soy from Brazil can call on governments to help achieve a goal of zero net emissions from the Amazon by 2020.

Why? Cutting a quarter of annual global deforestation would prevent a gigaton of CO₂ emissions.

Happy tenth birthday, EDF Climate Corps!

Each summer, EDF trains graduate students for summer fellowships at Fortune 500 companies, such as AT&T and CVS Health, and leading public institutions. Their mission: to spur greater energy efficiency and use of renewable energy. In ten years, 840 EDF Climate Corps fellows have worked in 440 organizations in the United States and China. Together they have identified annual carbon emissions reductions of two million metric tons, saving a potential \$1.5 billion. Nearly 70% of Climate Corps alumni are working in sustainability roles worldwide today.



"The skills and experience are invaluable, whether fellows pursue a full-time sustainability role or choose to embed a sustainabilityoriented mindset into a more traditional function," says former EDF Climate Corps fellow **Jenny McColloch**, now director of global sustainability at McDonald's Corporation.



EDF's vision is a healthy world for all. Whether by reducing children's exposure to lead or cutting air pollution, we're working to secure a clean, safe environment for every generation.



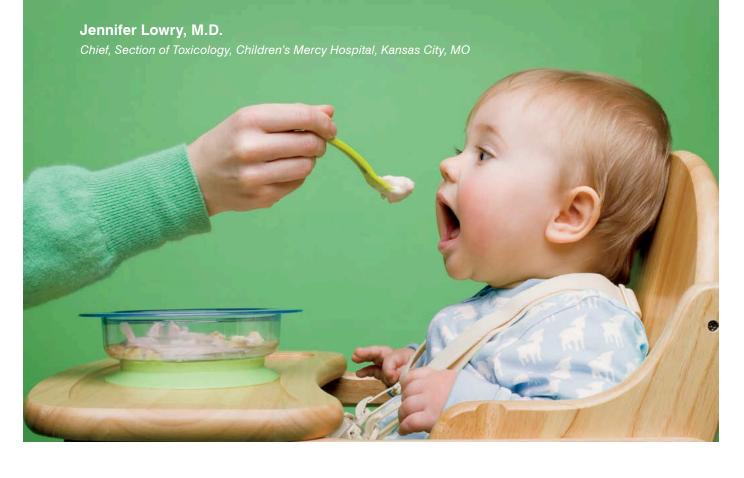
A new front in the fight to protect kids from lead "The report published by Environmental Defense Fund increased our knowledge of lead in baby food, which may harm children during their most vulnerable time of development."

Scientists, after years of research, have concluded there is no safe level of lead in the human body. So what's lead doing in baby food?

That's the question raised by a widely reported 2017 EDF study that found 20% of baby food samples—including fruit juices, cookies and root vegetables such as carrots—had detectable levels of lead. "Every child's food should come unleaded," says Dr. Sarah Vogel, EDF vice president for Health. "The pervasive presence of lead in food is poorly understood and concerning."

EDF's report reviewed federal data and estimated that more than one million children consume lead in excess of U.S. Food and Drug Administration (FDA) limits for food. The data also showed lead was more commonly found in baby food than in food intended for adults. It is unclear where the lead is coming from and why it may be more prevalent in baby food.

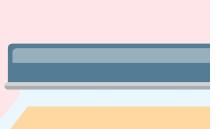
What we do know is that lead is a potent neurotoxin, and children are especially vulnerable to it. Lead exposure can result



Lead in baby food?

An EDF report finds that food is a significant source of lead exposure.





CAUTION: MAY CONTAIN LEAD

INGREDIENTS: WATER, CARROTS, SWEET POTATOES, WHOLE GRAIN BROWN RICE FLOUR, APPLES, TOMATO PUREE (WATER, TOMATO PASTE), CANOLA OIL, ONION POWDER, ASCORBIC ACID (VITAMIN C) TO MAINTAIN COLOR

| Nutrition Facts | Amount Per Se | | |
|--|---------------|-------|------|
| | Total fat | 3.5g | Tota |
| Serving Size 1 jar | Trans Fat | 0g | Diet |
| | Sodium | 50mg | Sug |
| Calories 130 | Potassium | 290mg | Prot |
| % Daily Value (DV) - Pi beta carotene) - Vitami | | | |



"EDF aims to significantly reduce Americans' ongoing exposure to toxic pollutants. It's a challenging goal, but we've made important progress."

Dr. Sarah Vogel VP Health

in lower IQ, memory problems, possible hearing loss and behavioral problems, including hyperactivity.

Parents can take action by asking baby food companies whether they regularly test their food for lead. They can also consult their pediatricians for advice on how to reduce lead exposure. EDF is pressing manufacturers and the FDA to pinpoint the source of the contamination and fix the problem. We have filed a Freedom of Information Act request to pry loose more data from the FDA. And we also helped develop legislation in the U.S. Senate that would strengthen lead limits in baby food.

The EDF report, based on a decade's worth of FDA data, resulted in a flood of

press coverage, including news reports on more than 100 television stations.

Drinking water is another worrisome avenue for lead exposure, and EDF is involved here, too. In 2015, the nation learned about the public health crisis in Flint, MI, when high levels of lead were found in drinking water because of lead service pipes. What most people don't



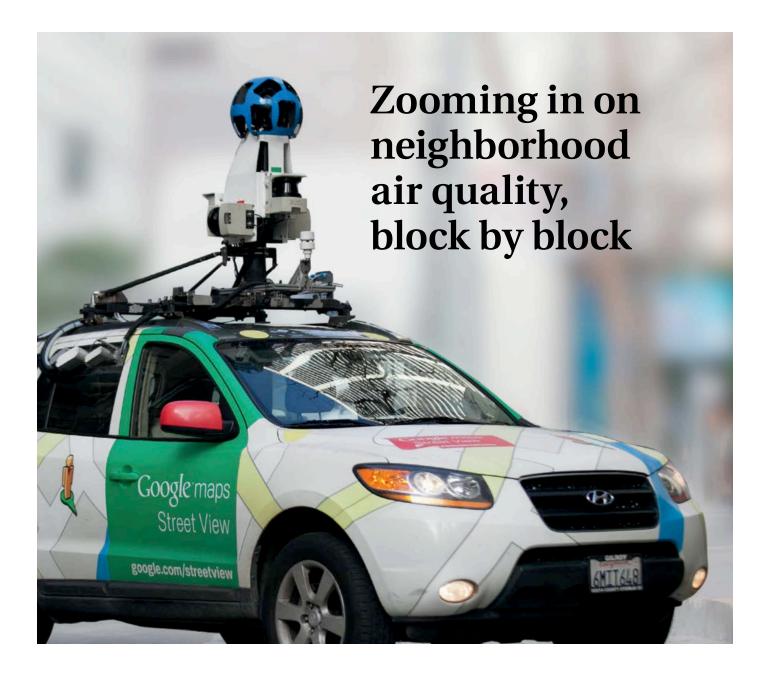
know, however, is that some six million homes across America are also at risk because they get drinking water through lead service pipes.

EDF is working with communities around the country to find the most efficient ways to remove lead service pipes. We're also testing drinking water for lead in at-risk child care centers nationwide.



LEADING THE WAY

EDF helped secure a national phaseout of leaded gasoline 30 years ago, eliminating a principal source of lead poisoning. Lead in gasoline and paint exposed children to dangerously high levels of lead. Since the 1970s, blood levels of lead in children have dropped by more than 98%.



Better monitoring of air quality is vital if we are to reduce air pollution that affects billions of people worldwide. But monitors are sparse, with less than a handful in many U.S. urban areas.

So, EDF asked, how can we measure pollutants and get an accurate picture block by block? Joining forces with Google Earth Outreach, we deployed Google Street View cars equipped with pollution sensors in Oakland, CA, a port city with heavy freeway traffic. This allowed us to measure air pollution at street level instead of with typical rooftop monitors. Over a year, the cars combed the 78-square-mile study area, taking readings every 30 meters to obtain three million measurements of pollutants such as nitric oxide. The results identified hotspots that varied greatly from block to block. In parts of the city, pollution levels were eight times higher than in others.

We're now expanding the project to Houston. "This new method makes invisible threats visible, so communities and policymakers can identify sources of pollution and take action," says EDF chief scientist Dr. Steven Hamburg.

EPA falters in Texas, and EDF steps in

As Hurricane Harvey pummeled Texas this summer, EDF toxicologist Elena Craft saw a danger no one was talking about: toxic emissions from the many damaged petrochemical plants around Houston.

As storage tanks leaked, gas pipelines ruptured and fires broke out at industrial facilities, Houston residents began complaining of nausea and dizziness. With nobody monitoring air quality, Dr. Craft hired a van with equipment for detecting toxic emissions. When the unit found a plume of benzene, a carcinogen, Dr. Craft (pictured) reported the finding to Texas officials while alerting the media. After days of official inaction-and continued pressure from EDF-EPA inspected the facility. In part because of Dr. Craft's work, Texas Governor Greg Abbott created a task force to investigate post-Harvey toxic pollution.

For years, Dr. Craft has led a coalition of community groups to reduce Texas air pollution. "We often turn to Elena for help on such issues," says Adrian Shelley, director of Texas Public Citizen.

Against the backdrop of a devastating hurricane season, proposed budget cuts at EPA would cripple the agency's ability to respond to disasters. EDF is fighting the cuts and expanding pollution monitoring so states have the information they need to make informed decisions.

OCEANS

EDF's vision is to create more resilient oceans that stay healthy in the face of climate change and provide more fish in the water, more food on the plate and more prosperous fishing communities.



Reviving fisheries around the world

34



"We view EDF as
a critical partner
to making fishing
sustainable in
the Philippines.
By building our
policy reforms
on science
and investing
in reliable
enforcement,
we can ensure
healthy fisheries
for the future."

Eduardo Gongona

Undersecretary, Philippines Bureau of Fisheries and Aquatic Research

The oceans produce and sustain life. Globally, three billion people rely on seafood as an important source of protein. Nowhere are livelihoods more dependent on oceans than in small-scale fishing communities, which account for one-third of the global catch. As the world's population increases and the demand for seafood rises, many of the world's fisheries could face collapse. To meet this challenge, EDF established the Fishery Solutions Center, a brain trust of scientists, economists and policy experts committed to improving fisheries management worldwide.

"One of the best ways to solve the fishing crisis is to place cutting-edge science and management tools in the hands of local leaders and help apply those in their fisheries," says Dr. Andrew Hutson, the Center's senior director. By empowering more governments and local communities to adopt sciencebased, sustainable fishing practices, we will increase fish populations, boost profits, enhance food production and help fisheries become more resilient to climate change. How? By putting fishermen at the center of the solution.

Why we work on oceans



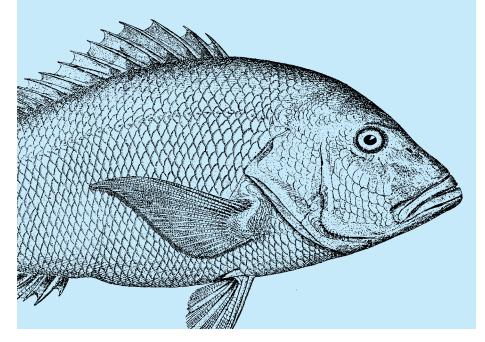


people rely on fish as an important source of protein

of the world's fisheries will be in deep trouble by 2030, if we do nothing



people are facing direct health risks because of declining fish populations



"By getting fishing right today, we can ensure healthier oceans tomorrow, improving the wellbeing of hundreds of millions of people around the world."

Amanda Leland Senior VP Oceans

In Indonesia, the world's second-largest fishing nation, EDF and local partners launched an initiative in 2017 for blue swimming crab, one of the country's most lucrative export fisheries. The project, the first on-the-water model of sustainable fishing in the country, affects the livelihoods of 4,000 people. "This is very important for our future," says Joko Lolono, 60, who has fished since age 12.

Half a world away, in Europe, EDF advised key officials as they rewrote the EU's Common Fisheries Policy, committing member nations to end widespread overfishing. In Sweden, we helped government and industry formulate reforms, including secure fishing rights, for some of their most important fisheries. "We're taking a leadership role in the future of our fisheries, and EDF has been a great partner in supporting us," says Peter Olsson, director of the Swedish Fishermen's Producer Organization.

To accelerate reform globally, EDF experts and partners have developed software, training manuals and case studies. With analyses that provide the scientific basis for sustainable





management, they have trained more than 700 fishery leaders from Chile to Spain to the Philippines.

"We can't prevent all the damage climate change will do to oceans," says Dr. Rod Fujita, director of research and development for EDF's Oceans program, "but we can build resilience and help fishing communities survive and even thrive."



LEADING THE WAY

A decade ago, EDF worked with fishermen to reform the red snapper fishery in the Gulf of Mexico. Today, the Gulf snapper population has tripled, revenues for fishermen have doubled, and the approach is used around the United States, contributing to a 60% drop in overfished species in federal waters.

Innovations in technology can help ensure sustainable fishing

HIGH-TECH VIDEO CAMERAS

Capture high-resolution fishing imagery

GPS ANTENNA

Provides location and time of fishing activities

HYDRAULIC AND ROTATION SENSORS

Trigger video cameras to record the catch ELECTRIC MONITORING COMPUTER

Records fishing vessel's telemetry and video data

Just as technology helps fishermen target their quarry, it can help regulators monitor the catch. EDF has long advocated electronic monitoring to improve accountability and reduce cost.

In New England, we launched a pilot program with the Gulf of Maine Marine Research Institute that brings satellitebased technology to the groundfish fishery. Electronic monitoring across the fleet—using sensors and smart cameras that can detect catch patterns—is a more accurate way to ensure compliance with catch limits than today's system, in which human observers are present on just one out of seven boats.

The current lack of oversight allowed cheaters like fishing mogul Carlos Rafael,

who owned 40 boats, to profit illegally. Known as "The Codfather," Rafael was convicted of mislabeling millions of pounds of fish and exceeding catch limits. After advocacy by EDF and allies, regulators voted in 2017 to overhaul the monitoring program. "These innovations can improve science and restore fairness to the industry," says our Northeast fisheries manager Joshua Wiersma.

A West Coast fishery comes back to life

Declared a federal disaster in 2000, the Pacific groundfish fishery—including species of sole, flounder and rockfish is experiencing a remarkable recovery. Nearly two dozen important species are now certified as sustainable, and fishing communities in California, Oregon and Washington are on the rebound.

Pa

Two popular species, bocaccio and darkblotched rockfish, achieved healthy population levels in 2017, years ahead of schedule. Populations of these slowgrowing fish had been near collapse due to faulty management and overfishing.

What happened? The National Oceanic and Atmospheric Administration attributes the success to habitat protection and secure fishing rights, a new management system that EDF helped implement in 2011. The result: Fish stocks are the healthiest they've been in two decades, revenue is up and the amount of discarded fish has dropped by an amazing 80%.

"Twenty years ago, they wrote the obituary for this fishery," says Brad Pettinger, president of the Oregon Trawl Commission. "We demonstrated we can be good stewards of a public resource."

This West Coast success is a testament to what's possible. It's also a model for other fisheries around the world.

Offloading rockfish at Pacific Seafood in Newport, OR

ECOSYSTEMS

EDF's vision is a world where natural systems thrive and people flourish, despite changes in global climate.



In the fight against extinction, ranchers and farmers step up "Owners of working lands must play a role in the survival of threatened species. EDF habitat exchanges allow us to do this."



Shortly after Amy and George Greer moved to their 6,700-acre cattle ranch in the Texas Hill Country in 2008, they stumbled upon a magical sight: The trees bordering the creek on their property were festooned with thousands of monarch butterflies. "I'll never forget it," says Amy Greer, a biologist and sixth-generation rancher. "We never saw anything like that again." The great annual migration of monarchs spans the entire continental United States. But in just two decades, the butterfly's numbers have plummeted 90%. Scientists warn it could be extinct in 20 years if conservation efforts fail.

A key reason for the monarch's decline is the loss of the species' milkweed habitat, where butterflies lay their eggs and caterpillars feed. In 2017, EDF launched a nationwide campaign to save the monarch, focusing on farmers who own much of the land along the "superhighways" used by monarchs to reach their Mexican wintering grounds.

Our goal is to restore 800,000 acres of native habitat, helping the species weather multiple threats. To encourage

The humble plant that powers an epic migration

The monarch is the only butterfly that performs a two-way migration. Dependent on milkweed, they fly to Mexico and back, a trek that takes four generations to complete. EDF is targeting key states along the main monarch flyways to restore vanishing habitat so that future generations of Americans can marvel at this miraculous species.





"With the right incentives, we can enlist landowners in large-scale conservation of clean water, fresh air and a healthy climate."

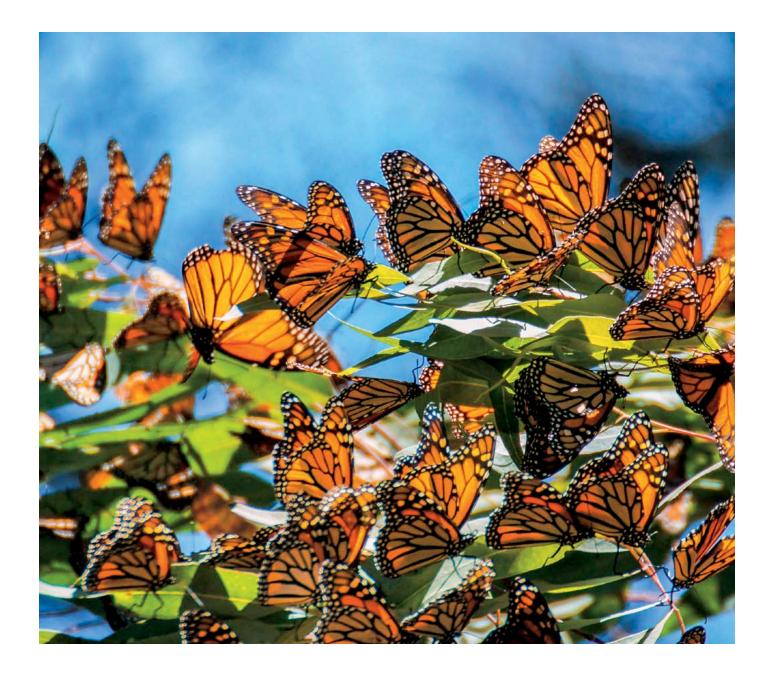
David Festa Senior VP Ecosystems

the restoration of habitat, we created the Monarch Butterfly Habitat Exchange, where farmers and ranchers can earn credits for growing milkweed, which are then sold through the exchange to buyers who want to see the monarch survive. The U.S. Fish and Wildlife Service has approved EDF habitat exchanges as a preferred option for saving at-risk species, and the first exchanges are now being launched in California, Missouri and Texas. A wide array of potential investors—from food companies to conservation funds and private citizens—has responded to the project, recognizing that it will help all pollinators, including native bees.

At the Greer ranch and elsewhere, EDF has developed habitat plans based on

planting native flowering plants, as well as a tool for measuring habitat quality, so that investors have a baseline against which to measure progress.

All agriculture stakeholders, from farmers to food companies, have an incentive to help keep the butterfly from being listed as endangered. Such a listing could mean unwanted regulation and land-use



restrictions for landowners. "We can also use the income," adds George Greer.

"I have a lot of respect for everything EDF does," says Amy Greer, who also surveyed habitat for the black-capped vireo with us. "If we can take our piece of land and restore it to help the butterfly, my hope is that will inspire others and we'll get to the scale we need."



LEADING THE WAY

EDF pioneered large-scale habitat conservation on working lands with Safe Harbor, which rewarded landowners for creating habitat. More than four million acres were enrolled, benefiting creatures such as the San Joaquin kit fox. Today, EDF is fighting attempts to weaken the federal Endangered Species Act.

A brighter future for the Mississippi River Delta

The world's largest coastal restoration project got a boost in June 2017, when Louisiana approved a master plan to address its land-loss crisis. EDF's coalition mobilized the support of more than 200 businesses. The plan outlines how \$50 billion is to be spent over 50 years on projects such as restoring barrier islands and rebuilding wetlands. Already, 135 projects have been completed or are underway, including 50 miles of barrier islands. Key to the plan is replenishing wetlands-which help protect New Orleans from storms-by diverting sediment-rich Mississippi River water. We're sharing our coastal work with planners in other areas experiencing severe flooding. Says Steve Cochran, director of EDF's Mississippi River Delta work: "Coastal areas from Miami to the Mekong Delta face similar challenges."

Western water shortages can only be solved cooperatively. In 2017, EDF spearheaded a deal that makes more Colorado River water available for the environment. Under the agreementthe first of its kind-the city of Phoenix, the State of Arizona, the U.S. Bureau of Reclamation and the Walton Family Foundation paid \$6 million to the Gila River Indian Community in exchange for their leaving 40,000 acre-feet of the tribe's water allotment in Lake Mead-equal to 35% of Phoenix's annual consumption. The extra water will slow the lake's decline and lock in supply for wildlife. It's a model for cooperative conservation deals throughout the parched West. Says Gov. Stephen Roe Lewis of the Gila River Community (pictured): "Working with partners like EDF, we're helping preserve the health of the Colorado River system."



On the path to sustainable farming

American food production helps feed the world, but it takes a heavy toll on the environment. Agricultural runoff is the source of 70% of the nitrogen that causes a massive dead zone in the Gulf of Mexico. Excess fertilizer also forms nitrous oxide, a potent greenhouse gas. EDF is working with farmers to improve fertilizer efficiency and make farmland more resilient to climate change. A suite of approaches—precision nutrient management, cover crops, no-till, natural buffers and wetlands—can minimize fertilizer loss and improve water quality. But farmers need access to the right fertilizer efficiency tools. So EDF created NutrientStar, a guide for agricultural producers that reviews how well these tools work on the farm. To hasten the transition to sustainable farming, we're also leveraging Walmart's food supply chain to create demand for sustainably grown crops. Partners include Land O'Lakes, Campbell Soup Company and the National Corn Growers Association. Food companies and agribusiness have committed to improved conservation practices on more than 20 million acres of grain by 2022, putting us nearly halfway to our goal of 45 million acres.

EDF's Karen Chapman with Ohio farmer Todd Hesterman

Financial overview

Environmental Defense Fund continued to grow during fiscal 2017, as total operating expenses reached a record \$182 million, an 11% increase over fiscal 2016.

Nonprofit accounting principles require us to record income in the year funds are raised, not in the year designated for use. A significant portion of this year's work was supported by restricted multiyear grants awarded in prior years.

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

New support and revenue of \$158 million in fiscal 2017 showed sound fundraising strength. Contributions and membership increased 15% over fiscal 2016, providing nearly two-thirds of total support and revenue.

Program spending in fiscal 2017 was 84% of total expenses. Development represented 8% of expenses, while management and administration was 6%. Membership and new member acquisition totaled 2%.

Over the past five years, EDF's net assets have grown 23% to \$192 million, providing a strong financial foundation as we embark on the ambitious goals of *Pathways 2025*, our strategic plan for the years ahead.

We are thankful for your support and recognize our responsibility to steward your investment well and deliver strong results for the environment and human health.

John McGeehan

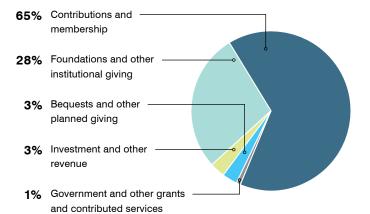
Chief Financial Officer

TOTAL PROGRAM AND SUPPORTING SERVICES EXPENSES

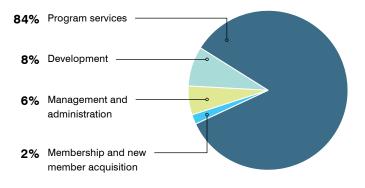
In millions of dollars

| 2014 | 2015 | 2016 | 2017 |
|------|------|------|------|
| 134 | 145 | 164 | 182 |

SOURCES OF SUPPORT AND REVENUE



EXPENSES



Statement of activities

| Year ended September 30 | UNRESTRICTED | RESTRICTED | TOTAL 2017 | TOTAL 2016 |
|---|---|---------------|-------------------|---------------|
| OPERATING SUPPORT AND REVENUE | | | | |
| Support: | | | | |
| Contributions and membership | \$ 38,807,528 | \$ 64,811,209 | \$ 103,618,737 | \$ 90,432,269 |
| Foundations and other institutional giving | 306,238 | 43,350,823 | 43,657,061 | 54,454,366 |
| Bequests and other planned giving | 4,531,399 | 33,728 | 4,565,127 | 9,152,889 |
| Government and other grants and contributed services | 1,237,861 | 838,123 | 2,075,984 | 14,256,453 |
| Total support | 44,883,026 | 109,033,883 | 153,916,909 | 168,295,977 |
| Revenue: | ••••••••••••••••••••••••••••••••••••••• | | | |
| Investment income allocated for operations | 2,595,321 | 742,844 | 3,338,165 | 2,815,898 |
| Fees, royalties and other income | 729,241 | - | 729,241 | 913,608 |
| Total revenue | 3,324,562 | 742,844 | 4,067,406 | 3,729,506 |
| Net assets released from restrictions | 141,758,771 | (141,758,771) | - | _ |
| Total support and revenue | 189,966,359 | (31,982,044) | 157,984,315 | 172,025,483 |
| EXPENSES | | | | |
| Program services: | | | | |
| Climate and energy | 85,915,786 | - | 85,915,786 | 75,453,948 |
| Oceans | 22,142,158 | - | 22,142,158 | 24,560,145 |
| Ecosystems | 24,274,330 | - | 24,274,330 | 20,985,800 |
| Health | 10,057,330 | - | 10,057,330 | 8,766,028 |
| Education | 8,829,989 | - | 8,829,989 | 7,040,201 |
| Membership activities | 2,763,209 | - | 2,763,209 | 2,240,862 |
| Total program services | 153,982,802 | - | 153,982,802 | 139,046,984 |
| Supporting services: | •••••• | | | |
| Management and administration | 10,178,361 | - | 10,178,361 | 9,097,586 |
| New member acquisition | 460,535 | - | 460,535 | 373,477 |
| Fundraising: | | | | |
| Membership | 3,731,692 | - | 3,731,692 | 3,091,988 |
| Development | 13,872,182 | - | 13,872,182 | 11,971,727 |
| Total supporting services | 28,242,770 | - | 28,242,770 | 24,534,778 |
| Total operating expenses | 182,225,572 | - | 182,225,572 | 163,581,762 |
| Change in net assets from operations | 7,740,787 | (31,982,044) | (24,241,257) | 8,443,722 |
| Other expenses, net of contributions and other income | 455,296 | (32,073) | 423,223 | (632,813) |
| Investment results, net of allocation to operations | (1,667,374) | 761,561 | (905,813) | (602,527) |
| Change in net assets from discontinued operations | 1,790 | | 1,790 | 4,150 |
| Change in net assets | 6,530,499 | (31,252,556) | (24,722,057) | 7,212,532 |
| Net assets, beginning of year as restated | 51,030,138 | 165,651,856 | 216,681,994 | 209,469,462 |
| Net assets, end of year | \$ 57,560,637 | \$134,399,300 | \$191,959,937 | \$216,681,994 |

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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