



Leading Transformational Change

Strategic Plan 2010–2014

2013 UPDATE

EDF STRATEGIC PLAN 2013 UPDATE

Our mission / PAGE 4

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.

Our goals / PAGE 6

Climate and Energy

Avoid catastrophic consequences of climate change by reducing greenhouse gas emissions and bolstering ecosystem resilience.

- Hasten the transition to clean, low-carbon energy, most urgently in the U.S. and China.
- Reduce emissions from agriculture and deforestation.
- Cut emissions of methane and other climate accelerants.

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Oceans

Protect oceans by creating sustainable and healthy fisheries.

- Make catch shares the standard in U.S. fisheries.
- Promote catch shares internationally.
- Protect and restore ocean habitats.

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Ecosystems

Preserve critical land and freshwater ecosystems for the benefit of people and wildlife.

- Help farmers become stewards of clean air and water.
- Conserve wildlife by helping landowners protect habitat.
- Restore coastal wetlands of the Mississippi River Delta.

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Health

Safeguard human health by reducing or eliminating environmental threats, including toxic chemicals and pollution.

- Reform U.S. toxic chemicals policy.
- Accelerate innovation through corporate partnerships.
- Cut air pollution from power plants and transportation.

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Our core capabilities: What's needed to deliver on our goals / PAGE 25

From inception to full implementation

Design our work for broad-scale impact, and forge the partnerships needed to deliver transformational change.

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Nurturing people and ideas

Cultivate the human capital and the management that enable us to identify, apply and hone the best ideas.

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Communications and persuasion

Engage and persuade key decision makers and the public through a broad set of communication channels.

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Investment

Secure the funding needed to support our goals and efficiently allocate it consistent with our strategy.

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Integrating new directions



Partway through the five-year period covered by this strategic plan, we paused briefly to assess our progress and make midcourse corrections.

In 2013, the staff and trustees of Environmental Defense Fund took a candid look at the changing context of our work and at our progress to date toward our five-year goals. In some areas, we had achieved major advances in the course of three years. In other areas, particularly Climate, we met obstacles that must be overcome.

In this update of our strategic plan, most of our five-year objectives stand as originally written, but others have been revised to reflect changes in the world. Also, we added new objectives in two areas that were only touched on in the earlier version.

Those areas—energy and nitrogen pollution—originally were set apart as new directions but now are integrated fully. Energy work was merged into our climate goal, now called Climate and Energy, and nitrogen reduction is part of our Ecosystems goal. Meanwhile, we continue to investigate newly emerging issues that could lead to future goals.

For Climate and Energy, we have refined our strategy. National limits on U.S. greenhouse gas emissions, while ultimately needed, are not immediately achievable given high hurdles in Washington. So we are focusing on specific emissions reductions, such as in California and for new vehicles. Our aim is to build momentum, show how addressing climate change can help build jobs and prosperity, and restart the national climate conversation.

In the rapidly expanding field of natural gas development, we are concentrating on the key climate issue of methane leakage and on reducing the risks to communities and the environment posed by shale gas extraction.

On the international climate front, we have centered our attention on key opportunities in China, the world's largest carbon emitter, and Brazil, once the largest source of carbon from deforestation. These and other places now are moving ahead on climate action and could help lead the way to broad carbon markets in the future.

New challenges that were only touched on in the first edition of this plan have now been integrated fully into our work.

For Ecosystems, we are scaling up our work to achieve wider impact. Building on the place-based successes that characterized our Land, Water and Wildlife work for many years, we now are focusing on economic incentives that can be applied across the nation. These incentives help reduce harmful practices and reward farmers, ranchers and forest owners for enhancing the natural services that their lands provide—such as wildlife habitat, water purification and greenhouse gas reduction.

As for EDF's other two goals, Oceans and Health, our main objectives are unchanged. While serious challenges still lie ahead, we already have achieved important results.

For Oceans, a proven fishery management method called catch shares, which EDF has long advocated to help the oceans and fishing communities, now is being used for nearly two-thirds of the fish caught in U.S. federal waters, and many fish populations are rebounding. In fact, U.S. fish landings reached a 17-year high, fewer fish are being discarded, and fishermen are better off. As a result, EDF has been asked to help design catch shares in places ranging from Mexico to Belize, Europe and Indonesia.

For Health, we helped secure major improvements in the Environmental Protection Agency's collection and disclosure of crucial information on the production, use and health effects of tens of thousands of chemicals in commerce. We also helped win the first national limits on mercury, arsenic and other toxic emissions from power plants. That EPA action, one of the biggest public health advances in a generation, will prevent as many as 11,000 premature deaths and 130,000 asthma attacks annually. Our sister lobbying group, Environmental Defense Action Fund, is helping defend the new mercury standards against Congressional attempts to block them.

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Pausing briefly for this reassessment enabled us to celebrate our achievements, reflect on setbacks and recalibrate the course ahead. In the following pages, we lay out the vision of where we want to be by the beginning of 2015. Our objectives are very ambitious, but the scope of today's environmental problems demands no less.



If we fail to cure Earth's environmental ills, it won't be that we lacked the needed remedies. It will be that we didn't use them in time.

EXECUTIVE SUMMARY

Leading transformational change

Environmental Defense Fund's longtime focus on four key areas—Climate and Energy, Oceans, Ecosystems and Health—gives us the breadth to confront the most serious and complex environmental challenges facing the planet. To address these problems before they spiral out of control and become irreversible, we have set very ambitious goals:

Climate and Energy: Avoid catastrophic consequences of climate change by reducing greenhouse gas emissions and bolstering ecosystem resilience.

Oceans: Protect oceans by creating sustainable and healthy fisheries.

Ecosystems: Preserve critical land and freshwater ecosystems for the benefit of people and wildlife.

Health: Safeguard human health by reducing or eliminating environmental threats, including toxic chemicals and pollution.

Transformational change, the kind of lasting change that influences entire sectors of the economy, is needed to achieve such formidable goals. It requires working with others, including companies, landowners and policymakers.

EDF's greatest accomplishments on this scale have come from designing economic incentives to protect the environment, and this will continue to be the dominant theme of our work. Markets unleash people's creativity, guide entrepreneurs and catalyze innovation.

Coupled with this economic savvy are EDF's scientific rigor, legal and policy expertise and a uniquely effective way of working with business. We use a broad range of approaches to get results, including persuasion, lobbying, public education and litigation. Our staff is a source of tremendous strength, and we will continue to build that human capital and foster an atmosphere of innovative thinking.

While the current economic climate adds to the challenge of funding our work, it also makes some people and institutions more open to transformational change. Now is the moment when major sectors of the economy—such as energy infrastructure—are ripe for reinvention.

Never has there been a greater need to align economic incentives with the protection of the environment. Together with our supporters and allies, we will seize this opportunity to protect and restore the vibrant balance of life on Earth.

Our mission



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.

What distinguishes Environmental Defense Fund is the scope of our work—and our unique approach to getting results.

We work to solve the most critical environmental problems facing the planet. This has drawn us to areas that span the biosphere: climate and energy, oceans, ecosystems and health. Since these are intertwined, our solutions take a multidisciplinary approach. We work in concert with other organizations—as well as with business, government and communities—and avoid duplicating work already being done effectively by others.

Over the years EDF has brought a series of innovations to protecting the environment, and we continue to innovate today.

In 1967, we were the first modern environmental group to be founded by scientists. Ever since, we have followed the science, even when it leads in unfamiliar directions. Rigorous science guides us in identifying the most serious problems and evaluating the most effective remedies. As we look to the future, our science-based inquiry will be even more important in order to foresee emerging threats and create new solutions.

From the outset, EDF paired scientists and attorneys. Then, in the 1970s, we became the first environmental group to hire full-time Ph.D. economists, adding an expertise that has led to our prominence in designing market-based solutions. In the 1990s, we pioneered both corporate partnerships and some of the first interactive uses of online communications.

We believe in setting clear goals and measuring the outcomes. Since we aim to produce not merely incremental improvement but truly transformational change, we concentrate on efforts that we are prepared to implement fully, whether on our own or with capable partners, and we hold ourselves accountable for our results.

What if scientists, economists and lawyers teamed up to solve environmental problems? It’s happening every day at EDF.

The power of market incentives

EDF's most noteworthy environmental results have been achieved when we've helped design, create, reconfigure and reform markets. Markets, acting like a magnet, create a pull on people and businesses.

Markets can act like a magnet to pull brainpower and capital toward green solutions.

When markets fail to account for the true costs of pollution and resource use, they can fuel environmental degradation—as evidenced by the state of the world's climate and many fisheries. But when a market is crafted to protect the environment, it attracts brainpower and capital toward green solutions, aligning private incentives with the public good.

That's what happened with the U.S. cap-and-trade system to curb acid rain that EDF helped create for the Clean Air Act in 1990. Acid rain pollution was reduced faster than the law required, at less than one-third of the expected cost, prompting *The Economist* to hail it as “the greatest green success story of the past decade.” Similarly, carbon markets will combat global warming by pulling inventors and investors toward low-carbon energy solutions.

Of course, markets are not a panacea. The turmoil in the financial system in recent years, and the ripple effects it sent throughout the world's economy, brought renewed attention to the importance of getting the rules right and ensuring that markets are well designed and risks are appropriately regulated.

In order for markets to work well, there must be good data, strong enforcement and often the backstop of litigation. And as EDF's work expands around the globe, our solutions must be tailored to the institutional and policy context of the countries we work in.

Nonetheless, the underlying principles at the heart of our market-based approach remain the key to our success: Environmental policies work best when they align the economic incentives of private actors with the desired societal benefits such as clean air.

Designing the economic architecture and getting the rules right is what EDF does best. We know how to dive into a problem, engage all the participants and figure out the best ways to reward environmental protection.

The tragedy of the free-for-all

Some of the most serious environmental problems result from what economists call the “tragedy of the commons.” Picture the Boston Common in early colonial days when everyone in town used it as a pasture. Overgrazing soon ruined it.

Today, overuse of the atmosphere as a dumping ground for air pollution endangers the climate, while overfishing threatens the oceans and inefficient irrigation depletes the water in rivers and streams.

Market incentives offer a solution.

If government sets a cap on air pollution, fishing or irrigation, for example, it gives an economic value to protecting the environment.

Environmental Defense Fund has been designing market-based solutions since the 1970s.



Our goals



If EDF tried to work on every environmental problem, we would solve none. Since our first strategic plan in 1997, we have seen the value of concentrating our work where it is most needed, within our four broad goals: climate and energy, oceans, ecosystems and health.

Even within these four goals, we must be very selective in the work we set out to do. In the current economy, we must do more with less. Consequently, we approached our strategic planning efforts with the aim of tightening our focus. To do this, we applied three screens to assess each part of our current work and potential future work:

At least 80% of our work should fall where our three criteria overlap.

1. Is it a **scientifically important environmental challenge**, not being sufficiently addressed by others, with the potential for transformational improvement?
2. Is it the **kind of work EDF is best at**, a situation where designing, reconfiguring or harnessing markets is part of the most effective response?
3. Do we already have, or can we attract, **the resources needed** to solve the problem—in terms of talent, influence and funding?

We want at least 80% of our work to fall in the sweet spot where these three criteria overlap. In some instances we've adjusted our approach to move work into the sweet spot. For example, much of our future work on water-use allocation will center on water markets. Markets aren't appropriate for every problem, so some of our work, such as reducing human exposure to toxic chemicals, will focus on regulatory solutions. But the vast majority of our efforts will use economic incentives to achieve transformational change.

During the strategic planning process, we used the same three criteria to scan a wide range of emerging issues where more of EDF's attention might be needed in the near future. This led us to identify areas for near-term expansion—energy, nitrogen pollution and geoengineering—which have since been woven into the fabric of our work.



A growing international reach

As some of EDF's efforts have become increasingly international in scope, we have been building our capacity to work effectively around the globe, while still remaining U.S.-based. Meeting our goals for climate and oceans requires working internationally, and we have been expanding our environmental market expertise beyond the United States. EDF can be most effective by working in partnership with local people and institutions in each country we are engaged in.

We will be judicious in choosing where we work internationally. We will focus on countries facing environmental problems where our skill set is most needed and on global power centers, such as China, whose policies are central to meeting our goals.

Environmental justice

We will make environmental justice a priority. EDF has access to power brokers and opinion leaders. Many Americans—and most people in the developing world—do not. We have a responsibility to help ensure that their voices are heard in policy deliberations and that environmental benefits flow to those who are least empowered to advocate and most harmed by environmental degradation. We will do this in partnership with organizations that know these communities best.

Leveraging corporate partnerships

Since 1990, when EDF formed a waste reduction task force with McDonald's, we have joined forces with market leaders to protect the environment while improving the bottom line. In each partnership, our aim is not to improve just one company but to spur change across an entire industry sector and yield substantial environmental benefits.

Since we do not accept funds from our corporate partners, we are free to share our recommendations broadly with others. Through our highly visible partnerships with companies as diverse as DuPont, FedEx, KKR and Walmart, EDF has become the environmental partner of choice, enhancing our credibility in the corporate world and our ability to deliver environmental results.

Across all our programs, we will leverage corporate partnerships to create groundbreaking environmental innovations, and we will promote rapid and widespread adoption of such innovations by other companies as well.

EDF accepts no funding from its corporate partners.



Climate and Energy

OUR GOAL ▶ Avoid catastrophic consequences of climate change by reducing greenhouse gas emissions and bolstering ecosystem resilience.

THE CHALLENGE

Climate change is the most profound environmental challenge of our time—and it is proceeding at an alarming rate. It took the tragedy of Superstorm Sandy to get more Americans thinking seriously about the issue. While global warming did not cause the storm, warmer ocean temperatures and higher sea level clearly magnified its destructive power. Globally, the ten warmest years on record all occurred in the past 15 years.

We are fast approaching the stage where extreme disruptions could occur. There is no time to lose in reducing the emissions of carbon dioxide, methane and other greenhouse gases that cause global warming. And because some warming is inevitable as the result of past pollution, the most vulnerable people and ecosystems will need ways to adapt quickly.

THE SOLUTION

The global climate problem can seem overwhelming, but there are four areas where we can apply leverage immediately to achieve disproportionately large results: (1) the transition to **clean, low-carbon energy in the United States**; (2) **the parallel transition in China**; (3) the reduction of emissions from **agriculture and deforestation**; and (4) the reduction of methane and other short-lived potent greenhouse gases. Reducing emissions of methane and other “**climate accelerants**,” while we also reduce carbon emissions, could lessen the amount of increased warming over the next 20 years by some portion of 38%.

By focusing on these leverage points, in partnership with others, EDF will help bring the world closer to the turning point where greenhouse gas emissions finally stop rising and begin to decline. We may augment this list of four core areas, and we will continue to do some work, such as in U.N. negotiations, that does not fit neatly into these categories.

Hasten the transition to clean, low-carbon energy in the U.S.



Significant climate action in the United States remains essential to solving the global warming problem. Given that we have the world’s largest economy and are the second-largest emitter of greenhouse gases, many countries are unwilling to take significant action on climate before we do; hence the steps we take will have a ripple effect.

In the absence of national climate legislation, EDF is focusing on three key opportunities to reduce carbon emissions now and lay the groundwork for national action: California’s carbon cap-and-trade system; Clean Air Act standards for power plants and transportation; and new Smart Power policies to unleash the promise of efficiency and renewable energy in the electric sector. We also are taking steps to help bridge the partisan divide on climate, setting the stage for a productive conversation on national action in the future.

Promote California’s market-based approach to climate

A broad market-based approach is the key to keeping down the cost of climate action, which in turn lets more ambitious goals be set and achieved. California’s carbon cap-and-

Four leverage points are vital to help stabilize the climate.

trade system, established by the state's Global Warming Solutions Act, AB 32, is just such a market-based approach. As a co-sponsor of AB 32 (along with NRDC), EDF is engaged in the law's implementation and legal defense. We are demonstrating how the cap-and-trade approach can reduce greenhouse gas emissions while producing economic prosperity. The policies adopted in California can serve as a model for a national carbon market as well as for markets that are emerging around the globe that ultimately may link to California's.

Defend and advance the Clean Air Act

The Environmental Protection Agency (EPA) has established strict limits on carbon dioxide from new passenger vehicles under the U.S. Clean Air Act and has proposed standards for new power plants. We will press EPA to finalize those standards and to develop limits for existing power plants and large diesel trucks. Clean Air Act standards are the strongest policies now available at the national level to drive reductions in carbon emissions, but EPA's authority to enforce the Act has come under attack in Congress and the courts. We will continue to work with allies to defend past gains and secure further advances.

Unleash the promise of Smart Power

Imagine a world where we waste far less electricity—and where the electricity we do use is increasingly generated by clean power sources, including solar and wind. This combination of efficiency and renewables, which EDF calls Smart Power, can smooth the path to a low-carbon future. Electric utilities plan to invest up to \$2 trillion in infrastructure in the next two decades, and cutting-edge technologies like demand management and distributed generation are ready. EDF will work with state Public Utility Commissions and policymakers to clear away the thicket of obsolete regulation that is stifling innovation today. By working initially in nine key states that make up nearly half the U.S. energy market, we aim to start a ripple effect and help trigger a national market transformation, aligning the economic incentives with positive environmental outcomes. We also will continue our work to promote voluntary emission reductions, such as through the EDF Climate Corps program.

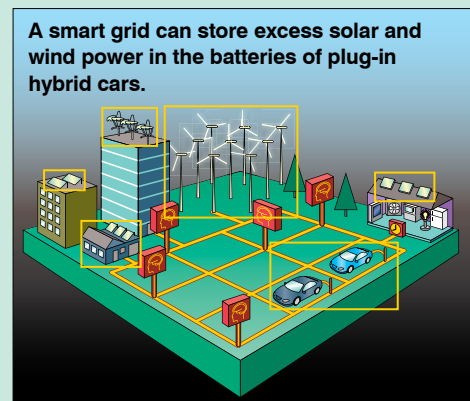
The smart grid will help manage electricity supply and demand in real time.

How to tap solar power at night

Solar and wind power can be feast or famine: First you get more than you need, then none. Tomorrow's intelligent electric grid will help even out this roller coaster of supply and demand.

When solar and wind generation peaks, the smart grid could route excess power to the batteries of plug-in hybrid cars, to be stored and tapped as needed. If the supply of electricity falls short, the grid could signal appliances to run later.

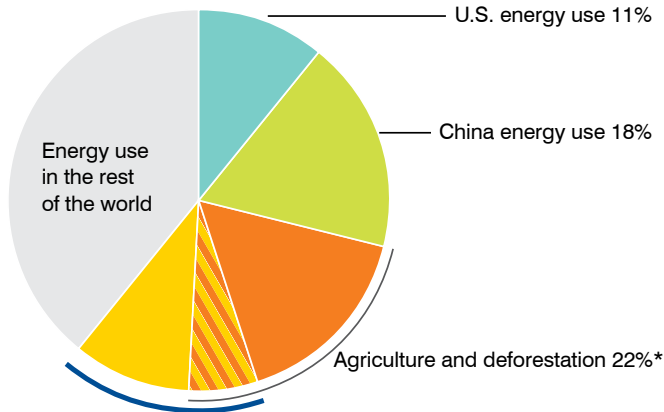
Through Pecan Street Inc., EDF and its partners have created a prototype smart grid in Austin, Texas, that uses two-way communication to relay data about electricity generation and consumption. This lets producers and consumers manage supply and demand in real time. It's the wave of the future, boosting efficiency and maximizing utilization of renewable energy.



A lasting impact on our planet

Warming over next 100 years caused by today's emissions

Each of the four focus areas of EDF's climate work represents a substantial percentage of the warming that will be caused over the next century by present-day emissions.



Climate accelerants 16%*

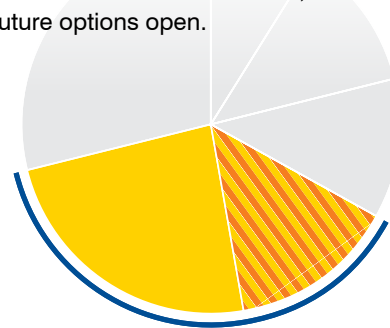
*Including methane from agriculture

The term "climate accelerants" refers generally to short-lived potent climate pollutants such as methane, fluorinated gases and black carbon, but only the first two are represented in these charts, because the available data on black carbon are incomplete.

20-year time horizon

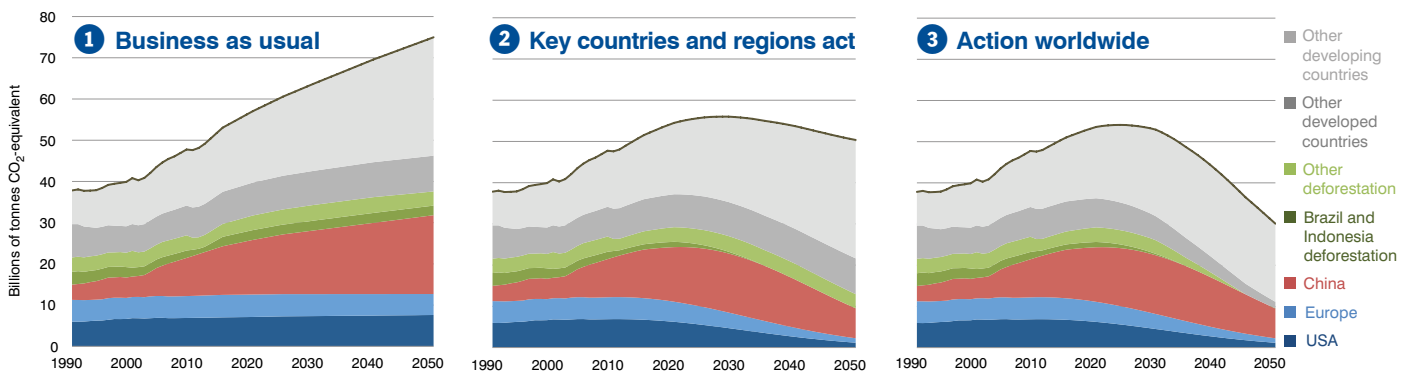
Cutting climate accelerants could have an outsized impact in the near term, lessening increased warming over 20 years by some portion of 38%, depending on the speed and extent of reductions.

The more we keep warming down in the near term, the better we will be able to reduce societal harm, limit biodiversity loss and keep future options open.



Climate accelerants 38%*

Charting the path toward a stable climate



In these charts of global greenhouse gas emissions, each colored layer represents the emissions from one country or group of countries as listed in the legend at the far right.

- 1 The chart on the left shows where global greenhouse gas emissions could be headed if we don't tackle emissions head on. The resulting warming might even trigger feedback effects, such as drying and burning of rainforests that would lead to even greater emissions and warming.
- 2 The center chart shows how we can begin to turn the corner if the work of EDF and other groups succeeds in reducing emissions in a few key countries and regions: the United States, the European Union, China, Brazil and Indonesia.
- 3 The chart on the right shows what could happen if other developed and developing nations follow suit in reducing their emissions. While this is still not enough to solve the climate problem, it puts the world on the right path.

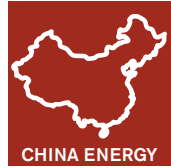
Restart a productive national debate on climate solutions

With EDF's strong tradition of bipartisanship, we have a unique role to play in building public understanding of climate change and support for action, particularly among independents and conservatives. We seek to change the political dynamic by developing policies that resonate with people across the political spectrum and communications that reach climate-skeptical voters, increasing the likely rewards for leaders who deal with climate honestly.

RAISING THE BAR: Our U.S. low-carbon energy objectives by 2015

- California power plants and other regulated greenhouse gas emitters achieve reductions in emissions that meet or exceed their obligations under the state's carbon cap.
- EPA finalizes carbon pollution limits for new power plants and achieves substantial progress toward establishing carbon limits on existing power plants and large diesel trucks.
- We are on track to lock in by 2018 an additional 8.5 to 13.3% reduction in U.S. carbon dioxide emissions (from a 2005 baseline) by improving the electric grid, renewable energy, demand response, energy efficiency and electric vehicles.

Hasten the transition to clean, low-carbon energy in China



China has made a serious commitment to reducing carbon pollution with seven pilot cap-and-trade programs in areas where 250 million people live. The government has asked EDF to help maximize the success of these pilot programs by engaging in their design and by training officials responsible for their implementation.

The goal is to reduce carbon emissions in China's main economic regions. Shanghai, for example, will focus on 200 large enterprises in the Yangtze River Delta.

We are confident that if these pilots are successful, even stronger commitments will be made in China's next five-year plan, which will determine the country's impact on global warming for decades to come. EDF will help lay the groundwork for China to establish a nationwide carbon-trading system and link it with other carbon markets. The actions China takes will reverberate through emerging economies and the developing world.

Climate change has become a primary concern for the Chinese government because it affects energy security, food security and social stability. With EDF's 20-year history in China and our expertise in designing market-based solutions, we are well positioned to help the country address its greenhouse gas emissions. We aim to bring about verified emissions reductions by developing environmental markets, building demand for environmental commodities and strengthening enforcement to ensure that market forces deliver environmental results. We also will work with global financial institutions to mobilize private capital for investment in supply chain energy efficiency.

RAISING THE BAR: Our China low-carbon energy objectives by 2015

- The seven pilot carbon-trading programs achieve their designated goals.
- China is on track to increase renewable energy to 15% of total electricity generation and to cap coal consumption by 2015.

Cap-and-trade pilot programs in China will reduce carbon pollution in areas where 250 million people live.

Reduce emissions from agriculture and deforestation



Agriculture and deforestation account for about one-quarter of global greenhouse gas emissions. The two are interrelated, because agriculture drives deforestation (through conversion of forests to farmland) and also is a direct source of emissions. As demand for commodities rises, it will be crucial to maximize the productivity of agriculture on existing farmland.

Reduce greenhouse gas emissions from agriculture

One way that agriculture affects climate is through the use of fertilizers. Excess nitrogen fertilizer on fields leads to increased emissions of nitrous oxide, a potent greenhouse gas. This is an issue around the world. From the U.S. Corn Belt (*see page 19*) to western China, EDF is working with farmers to determine the optimal amount of fertilizer their crops need. Reducing the excess saves them money and cuts pollution.

In China, where alleviating rural poverty is a top governmental priority, we are partnering with the State Council's Poverty Alleviation Office, which has representatives in every community. Together we have created a program where 500,000 poor farmers in Xinjiang, Sichuan and Shaanxi provinces earn income by cutting greenhouse gas emissions through improved agricultural practices, including precision application of fertilizer. In India, we and our partners are demonstrating innovations such as new farming practices and cleaner cookstoves that can improve the lives of rural villagers while reducing carbon emissions.

Reduce tropical deforestation

Deforestation of tropical forests—which results in the release of their stored carbon to the atmosphere—now creates almost as much global warming pollution each year as the entire U.S. economy. Just two countries, Brazil and Indonesia, together have accounted for well over half of the world's total forest loss over the past two decades. Although both countries' deforestation rates have decreased in recent years, there are disturbing indications that they could spike back up, so we must remain vigilant.

In Brazil, we seek to ensure that deforestation rates continue to decline, with a goal of zero net deforestation. Key to achieving that goal is to enhance the economic value of standing forests, using a set of policies known as REDD (Reduced Emissions from Deforestation and forest Degradation). We also promote programs that create sustainable livelihoods for the indigenous peoples who live in these forests and protect them from illegal encroachment. With our Brazilian partners, we have championed this approach for two decades.

Brazil has cut deforestation rates 76% below recent historical averages, already nearly meeting its 2020 target. A national REDD policy would help sustain this progress by turning reductions into economic assets for farmers and forest communities. At the government's request, EDF is analyzing policy options to maximize the effectiveness of such a program.

We also are engaging with regulators in multiple jurisdictions to open their cap-and-trade markets to REDD credits. If that happens, power plants and other regulated entities in those markets could meet some greenhouse gas reduction obligations by paying to preserve forests through the purchase of REDD credits.

RAISING THE BAR: Our agriculture and forest objectives by 2015

- China is on pace to enlist 20 million farm families in low-carbon farming programs by 2016.
- Brazil sustains progress toward its goal of reducing deforestation rates 80% below 2005 levels.
- The Brazilian state of Acre establishes a REDD program that produces high-quality credits.
- California's new carbon market is broadened to authorize the use of REDD credits.

Tropical rainforest destruction creates nearly as much global warming pollution as the entire U.S. economy.

Cut emissions of methane and other climate accelerants



Much attention has been focused on greenhouse gases that remain in the atmosphere long after they are emitted. Carbon dioxide and nitrous oxide have average lifetimes on the order of a century, so reducing those emissions is crucial for long-term climate stability. In the near term, however, short-lived but potent greenhouse gases—“climate accelerants” such as methane and some fluorinated gases—have an intensified impact.

Methane, for example, has 72 times the atmospheric heating effect of carbon dioxide, pound for pound, over 20 years. A prime source of methane emissions is leakage from the natural gas supply chain, including wells, processing, pipelines and local distribution. (Methane is the primary component of natural gas.) EDF’s goal is to minimize this methane leakage, with a target of 1% or less, the point at which replacing other fossil fuels with natural gas produces a climate benefit for nearly all uses in both the short and long term.

The amount and sources of leakage are not well understood, so EDF organized a series of studies with university researchers and corporate partners to map leakage along the supply chain. This will greatly increase our understanding of leakage rates and provide information needed to reduce leaks. We also are working to strengthen EPA national emission standards for oil and gas operations as well as for landfills, another large source of methane emissions.

These efforts complement our broader work to protect communities from the health and environmental consequences of natural gas production. EDF advocates tighter pollution controls, stronger enforcement, and disclosure of chemicals, water use and pollution. We are working toward these goals in 14 states that hold 85% of U.S. onshore shale gas reserves.

Understanding methane leakage in the U.S. natural gas infrastructure could provide a foundation to extend EDF’s efforts to other countries where natural gas is important or expected to become so, including China, Russia and Australia. EDF also is part of an international coalition launched by the U.S. State Department to address methane and other climate accelerants, including the fluorinated gases (F-gases) used widely in refrigeration and air conditioning. New substitutes for F-gases that are both ozone-safe and climate-safe have been developed but are not yet widely used. EDF will explore ways in which we might help hasten the introduction of these new products.

Since rice farming is another source of methane emissions, EDF is working with farmers on practices such as minimizing flooding of rice paddies, thus reducing methane releases. In California, we are developing methodologies that would let farmers earn credits in the carbon market for their methane reductions. We also are working with rice farmers in Asia and will assess whether we can take that work to scale.

Cutting emissions of climate accelerants can provide some reduction in warming over the next 20 years and, if accompanied by reductions in carbon dioxide emissions, will slow the rate of climate change, reducing impacts. Cutting climate accelerants also can provide important public health benefits through improved air quality.

RAISING THE BAR: Our climate accelerant objectives by 2015

- The studies quantifying methane leakage in the U.S. natural gas supply chain are completed.
- Major reductions in methane emissions are being secured, and total emissions from the natural gas supply chain are on track to be reduced to 1% or less.
- California carbon market methodologies are approved for methane reductions from rice farming.
- EPA limits are strengthened for methane emissions from landfills and oil and gas operations.

Methane leakage from the natural gas supply chain needs to be measured and minimized.



Oceans

OUR GOAL ▶ Protect oceans by creating sustainable and healthy fisheries.

THE CHALLENGE

We are taking fish out of the sea faster than they can reproduce. In 2003, *Nature* magazine reported a 90% decline in the populations of large fishes—the high-demand species such as tuna and swordfish—and more than two-thirds of global fish stocks have collapsed or are overexploited or fully exploited. Overfishing is the biggest driver of declining fisheries, although habitat loss, climate change and other factors contribute to the problem.

Conventional fisheries management has sought to limit overfishing indirectly, by methods such as shortening the fishing season, rather than by ensuring that fishermen adhere to strict limits on catch. The old approach has proved ineffective and resulted in increased damage to the ocean ecosystem. For example, non-targeted species (bycatch) are caught and discarded, either dead or dying.

THE SOLUTION

Giving fishermen a stake in protecting the oceans is by far the most effective way to turn declining fisheries around. One mechanism for doing this is called catch shares (or, more broadly, rights-based management). In a typical program, fishermen are allocated shares of the scientifically determined total allowable catch or are granted exclusive access to a fishing area in exchange for agreeing to protections such as strict fishing limits.

With catch shares, the fishermen are held strictly accountable for their limit, but they have flexibility in choosing when and how to fish, which enhances their efficiency. As fish populations increase, the amount fishermen can catch grows, so they have a long-term incentive to help the fishery recover.

According to a 2008 study published in *Science*, “Implementation of catch shares halts, and even reverses, the global trend toward widespread collapse.” The latest research shows that prompt action to restore fisheries could increase the abundance of fish in the seas by more than 50%, while doubling yields in many fisheries—providing more nourishment and economic value to people who rely on the oceans for food and jobs.

Make catch shares the standard in U.S. fisheries



Among environmental advocates, EDF has been the major U.S. proponent of catch shares, playing a key role in several pivotal reform efforts. Today nearly two-thirds of fish caught in federal waters fall under this powerful form of management. Fish populations are rebounding, far fewer fish are discarded and fishermen are better off.

EDF works with fishermen and fishery managers to help design successful programs. Once catch shares are instituted within a fishery, important work remains to be done to ensure that monitoring, reporting and enforcement are in place and the system works effectively. Those steps will help sustain the fishery’s economic and ecological recovery.

In addition to getting the policies right for commercial fisheries, we will help find management approaches that work for recreational fisheries, which often are poorly managed and overfished.

Implementation of catch shares halts, and even reverses, the global trend toward widespread collapse of fisheries.

RAISING THE BAR: Our domestic oceans objectives by 2015

- Catch share management is in place for the majority of fish caught in federal waters.
- Federal policies require fisheries managers to consider catch shares and to achieve economic and environmental results comparable to well-designed catch share programs.
- All U.S. catch share fisheries are meeting or exceeding targets for rebuilding fish populations and other goals (catch limit compliance, bycatch reduction, habitat protection, economic output).
- Four pilot programs feature effective management in recreational fisheries.

Promote catch shares internationally



Overfishing is a daunting global crisis, yet with the right approach and international partners, the solution is within our grasp. EDF's ambitious ten-year goal is to ensure that more than half the world's catch comes from countries that have embraced sustainable management as the norm. We are developing programs in several regions to help achieve this bold vision. We also helped bring about the adoption of a similar fisheries recovery goal at the World Bank, whose resources could help countries make the transition to sustainable fishing.

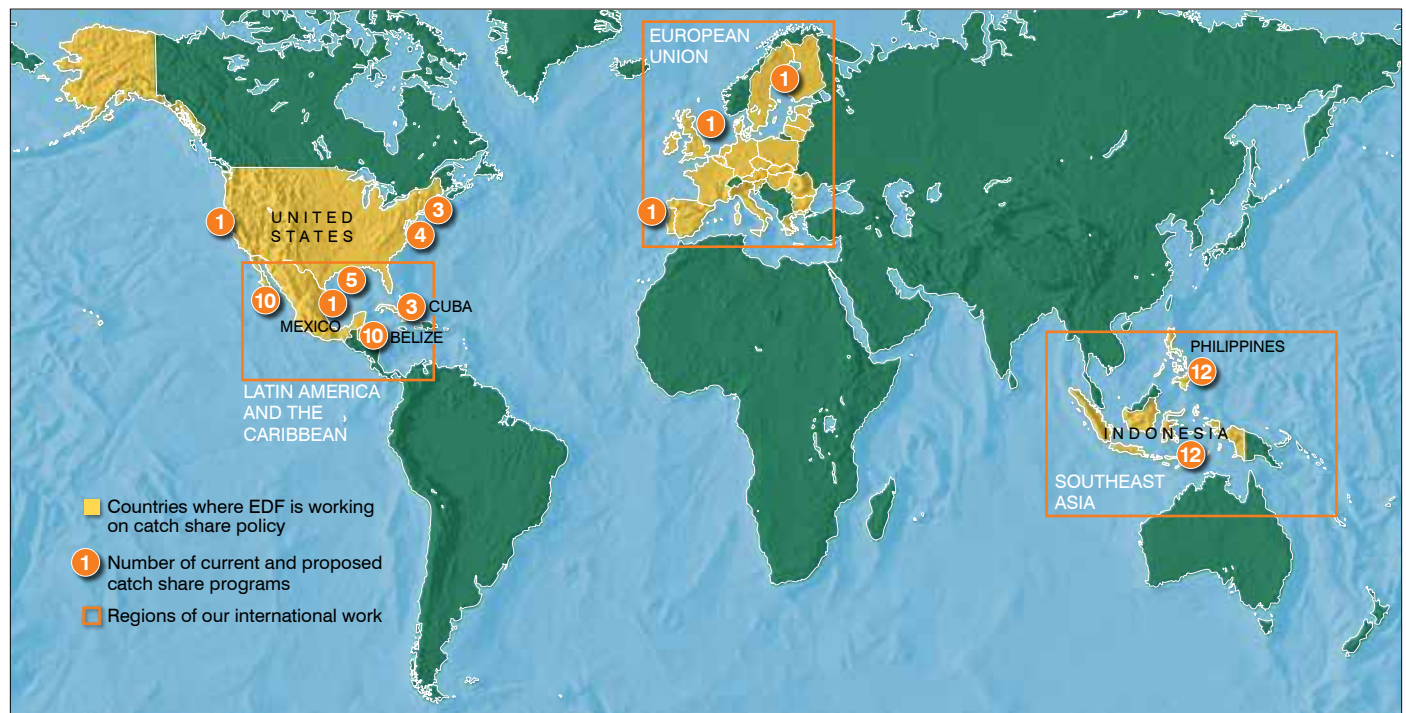
The solution to overfishing is within our grasp.

Europe: Leveraging the EU-wide Common Fisheries Policy

Europe's fisheries are in critical condition, with more than 75% overfished. The current renegotiation of the European Union's Common Fisheries Policy offers a once-in-a-decade chance to remedy the overfishing problem by instituting reforms such as catch shares.

EDF has helped lay the groundwork for EU fisheries reforms by applying lessons we have learned in the United States and elsewhere: conduct open dialogues with stakeholders; provide practical, science-based advice; and partner with fishermen.

EDF's catch share work around the world



We have expanded our catch share work from the United States to Latin America and the Caribbean; the European Union; and Southeast Asia. We are engaged both in policy development and in optimizing the design of particular catch share programs.

Half of the wild fish that people eat are caught in small coastal fisheries with limited oversight.

As a result, we are seeing ever-greater interest in catch shares from both fishermen and government agencies in Spain, Sweden, the United Kingdom and elsewhere. We will seize these opportunities to improve policy, advance science and develop new catch share programs with local partners.

Southeast Asia: Small-scale fisheries offer big opportunities

Half of the wild fish that people eat are caught in small coastal fisheries, particularly in tropical areas of the developing world such as the Philippines. Overfishing is driving these fisheries toward catastrophe. Most are essentially open to anyone, with limited oversight or management, so local fishermen have no incentive to fish sustainably.

EDF and partners, including Rare (a global conservation group) and UC Santa Barbara, have launched an initiative to promote proven strategies for fisheries management, coupling catch shares and marine reserves. The approach empowers local leaders by combining grassroots activism with social marketing.

The initiative, called Fish Forever, will kick off in Indonesia and the Philippines, reaching hundreds of fishing villages by 2017. We expect to expand the initiative to other developing countries in tropical regions within the decade.

Latin America and the Caribbean: An integrated ocean ecosystem

Overfishing is causing the collapse of fish populations in Latin America and the Caribbean, threatening critical habitats, such as coral reefs, and endangering communities that rely on fishing for their livelihood. Our strategy is to inspire widespread adoption of catch shares by showing how this approach can help restore regionally important fisheries in Belize, Mexico and Cuba.

- In Belize, EDF helped launch pilot programs for lobster and conch fisheries along the Mesoamerican Reef, a biological treasure. We have combined marine reserves with catch shares, creating a model for fishing communities across the region. After seeing our positive initial results, the Belizean government has made a commitment to spread the approach throughout the country, and our Fish Forever partnership is poised to help make that happen.
- In Mexico, EDF is partnering with nonprofit groups, fishery managers and local fishing communities. A new catch share program for the corvina fishery is a bright spot that is helping to demonstrate what is possible for fisheries.
- In Cuba, where EDF has operated for more than a decade under a special license from the U.S. government, we have helped create an extensive network of marine protected areas, one of the largest in the Caribbean. Now we are providing catch shares expertise to Cuban scientists, environmental and development organizations and the government. The goal is to design two sustainable-fishing pilot programs to benefit commercially important species.

EDF also is bringing together Cuba, Mexico and the United States in a first-of-its-kind recovery program for sharks in the Gulf of Mexico. As top predators, sharks are essential to healthy marine food webs. The three-country governance framework could serve as a model for recovery of other imperiled, highly migratory fish, such as tuna and swordfish.

Marine protected areas complement catch shares for maximum benefit to the oceans.

RAISING THE BAR: Our international oceans objectives by 2015

- Pilot catch share programs are launched with local groups in Spain, Sweden and the UK, and EU-wide policy encourages catch share adoption.
- Fish Forever reaches its first 30 fishing villages in Indonesia and the Philippines.
- Catch shares are being developed or implemented in at least ten fisheries in Mexico, Belize and Cuba as models for replication throughout Latin America and the developing world.
- EDF and partners have leveraged the World Bank's financial resources to drive transformation of fisheries in three or more countries.

Protect and restore ocean habitats



The quality and abundance of key ocean habitats such as spawning, nursery and feeding grounds are crucial in the recovery of troubled fisheries. Exciting new approaches are being developed to protect and improve such habitats. This will complement catch share programs and maximize the overall benefit to fisheries and marine biodiversity.

Marine protected areas that are closed to fishing are important tools for habitat conservation. The expected benefits often don't result, however, because of lack of compliance by fishermen. In many cases, the incentives to fish in a closed area outweigh the cost of being caught.

By giving fishermen a long-term interest in a fishery's recovery, catch shares have the potential to increase support for, and compliance with, marine protected areas. We believe fishermen will not only adhere to protected area boundaries, but also actively enforce them, when the economic incentives are appropriately aligned.

RAISING THE BAR: Our ocean habitat objectives by 2015

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



Ecosystems

OUR GOAL ▶ Preserve critical land and freshwater ecosystems for the benefit of people and wildlife.

THE CHALLENGE

Over the past century, human activities as diverse as farming, energy development and river navigation have had unintended consequences for land, water and wildlife. Today, hundreds of species are in danger of extinction, and cities and towns are at risk from extremes of floods and drought. Many rivers and lakes are too polluted to fish or swim in.

The changes brought by global warming will only exacerbate these problems. Wildlife refuges may no longer offer suitable habitat for species they once protected. Water supplies are under particular threat. Across America, 46 states are predicted to face serious water shortages during drought conditions.

THE SOLUTION

To ensure our environmental and economic security in the 21st century, we must protect land, water and wildlife at a scale never before attempted. This can be done only by changing the underlying economic incentives so they reward restoration, efficiency and pollution reduction. To accomplish this, we must work hand in hand with the private landowners—farmers, ranchers and forest owners—who manage 75% of the land in the contiguous United States, whose livelihoods are inextricably tied to healthy ecosystems.

In partnership with other national and regional groups, EDF will make it profitable for landowners to reduce pollution, use water efficiently and conserve wildlife habitat—even as they produce more food and fuel. For great rivers like the Mississippi, we will create incentives to maintain natural flows compatible with commerce. EDF's programs will support human well-being, enhance ecosystem health and promote economic growth.

Landowners could be profiting from the environmental benefits their land can provide.

Investing in nature's services yields growing returns

Local officials in Bloomington, Illinois, face the challenge of reducing nitrate levels in their water supply to meet EPA health standards for drinking water. The conventional solution would be to install costly water treatment equipment.

But by partnering with farmers upstream to install treatment wetlands, in collaboration with EDF and The Nature Conservancy, the city can ensure that nitrates are filtered out naturally at lower cost, a win for the farmers and the city.

America's privately owned working lands—farms, ranches and forests—have long provided many of nature's services. Yet each year we lose two million acres of these lands to sprawl

and development, in part because their services have been taken for granted. We must protect healthy ecosystems for future generations, or the bill will come due.



Wetlands do a remarkable job of filtering water, generally at far lower cost than building an expensive treatment plant.

Mike Jones

Help farmers become stewards of clean air and water



The 20th century Green Revolution in agriculture, with its expansion of irrigation and widespread use of synthetic fertilizers, has boosted crop yields globally and saved a billion people from starvation. But wasteful irrigation puts a strain on water supplies, and inefficient application of fertilizer causes polluted runoff and worsens climate change. This harms ecosystems and public health and ultimately threatens agricultural operations as well. The challenge is how to feed the world without harming it.

Watchwords for fertilizer: Use less, grow more

One key step is to reduce overuse of fertilizer. In partnership with universities and farm groups, EDF is showing farmers ways to determine the precise amount of fertilizer their crops need. We are focusing first on corn, America's largest commodity crop, and on the Midwest, the center of U.S. corn production.

To gain leverage, EDF is working with Walmart, the nation's largest grocery buyer, to establish purchasing preferences for corn products grown with less fertilizer. This includes not just corn itself, but also products that use corn as an input, such as beef, dairy products and cereals. We are helping Walmart develop a system for sourcing food from farmers who use best practices, and we are testing an early version with a group of farmers in Indiana. We will use the results to develop and refine the system and later expand its use throughout the Corn Belt.

More efficient fertilizer use will reduce water pollution as well as emissions of nitrous oxide, a long-lived potent greenhouse gas. In the future, farmers may be able to earn additional revenue in carbon markets for the nitrous oxide emissions they avoid.

Even with efficient use, some fertilizer still runs off fields and flows into streams, which can contaminate drinking water supplies and contribute to dead zones in lakes and estuaries. To address that, we are developing new techniques for filtering agricultural drainage water using natural systems such as wetlands. We plan to create financial incentives to help farmers deploy such systems to shield waterways from runoff.

The United States has made tremendous advances in the past 25 years to clean up waterways by controlling pollution from large industries and sewage treatment plants. Now we have the opportunity to focus on the largest remaining source of water pollution, agriculture, by enabling farmers to earn more if they protect water quality.

Use water more efficiently

Improving the efficiency of irrigation can help ensure that there will be sufficient water for people, agriculture and wildlife. For the Colorado River, the already overallocated supply of water will be further depleted by climate change and population growth. To address this problem, EDF has worked with the Bureau of Reclamation to shape a study on how to move water efficiently among multiple users.

Across the arid West, we will work with irrigators to build broader interest in new water management solutions that enhance the sustainability of agriculture, improve Western economies and preserve healthy river flows for wildlife. We have partnered with Protect the Flows, a coalition of Colorado River Basin businesses representing recreation and tourism, adding to the chorus of interests pushing for healthy river flows.

In partnership with EDF, retailers will buy corn products from farmers who protect the environment.

RAISING THE BAR: Our agriculture objectives by 2015

- Working with Walmart and other food buyers, be on track to cut fertilizer use by 2016 among the top 20% of U.S. corn farmers, who produce half the nation's corn.
- Be on pace to cut in half, within ten years, the number of U.S. waterways afflicted with dead zones, by establishing ways for farmers to profit from protecting water quality.
- Begin creation of a new management framework for the Colorado River that allows flexibility in water sharing and more efficient water allocation to meet both human and environmental needs.

Conserve wildlife by helping landowners protect habitat



The unprecedented pace of energy development in the West has put the energy industry on a collision course with wildlife. If the Endangered Species Act creates obstacles to the development of new domestic energy sources, such as wind farms, it could inflame anti-environmental sentiment and make it harder to protect wildlife on the ground.

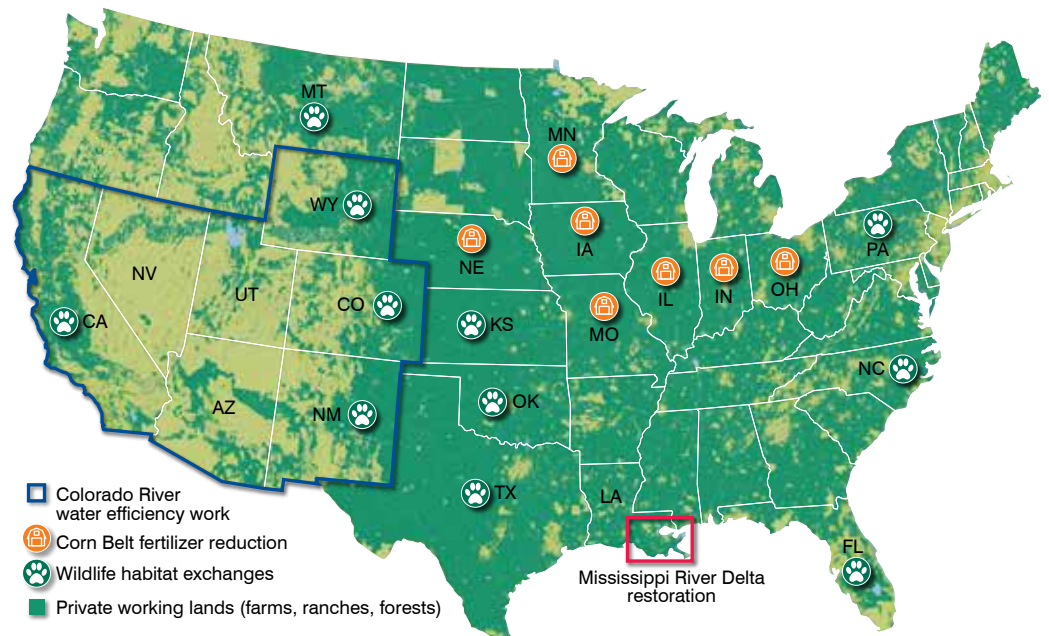
Habitat exchanges are a win-win for wildlife and landowners.

There is a better approach. Energy developers have several ways to obtain the habitat they need to offset development, including easements, land swaps and mitigation banking. But these agreements take time, and their reach is limited to owners who are willing to sell their land or encumber their title. Now EDF is pioneering an additional tool, habitat exchanges, that often can accomplish the same thing faster and more efficiently, without the need for deeds to change hands or for owners to take working lands out of production.

Simply put, habitat exchanges let landowners earn money by restoring wildlife habitat on their own land. Once the restored habitat is verified scientifically, the owner can sell habitat credits to developers to offset the impact of development nearby. Wildlife comes out ahead, developers cut costs and red tape, and landowners get a new source of income.

We first proved the concept at Fort Hood in Texas, where the Army has paid neighboring ranchers to create habitat for the endangered golden-cheeked warbler to replace what is

EDF's key points of ecosystem leverage



Two-thirds of the contiguous United States is in private working lands, the focus of EDF's work.

lost on base due to training activities. With local populations of the warbler rebounding, the State of Texas is adopting the habitat exchange approach for other rare wildlife.

These exchanges can be just as important for species not yet on the endangered list. The Fish and Wildlife Service is considering listing several species whose range coincides with major energy fields across the West, including the lesser prairie chicken. To head off the prolonged battles that could arise from such a listing, we will develop a habitat exchange for the prairie chicken to create enough habitat on private land to reverse the bird's decline.

If we succeed, we will build on that momentum and extend the approach to new regions in future years. We believe that habitat exchanges ultimately could attract a majority of the \$5 billion annually that developers now spend, often ineffectively, on attempts to protect wildlife. That shift would bring us to a tipping point, enabling us to secure federal rules establishing habitat exchanges as the preferred national approach to wildlife conservation.

EDF will continue to work closely with partners including The Nature Conservancy and other land conservation trusts, Partners for Western Conservation and the Texas Watershed Management Foundation.

RAISING THE BAR: Our wildlife habitat objectives by 2015

- Create a habitat exchange for the lesser prairie chicken and win approval from state and federal regulators.
- Launch three new habitat exchanges in target states affected by energy development.
- Half a million acres of prairie chicken and sage grouse habitat have been conserved or restored.

Restore coastal wetlands of the Mississippi River Delta



Decades of mismanagement of the Mississippi River system and its Delta have caused the loss of half of Louisiana's threatened coastal wetlands, destroying wildlife habitat, hurricane buffers, and the natural support system for much of America's energy, shipping and seafood industries. We and our partners are taking action now to restore and protect this coast.

80% of BP's fines will be dedicated to Gulf Coast restoration.

The BP Deepwater Horizon disaster further damaged the region by releasing millions of barrels of crude oil into the Gulf of Mexico in 2010, but the country has rallied to help the area recover. EDF and partners led a successful effort to pass the RESTORE Act, a bill to dedicate 80% of any BP fines to Gulf restoration. With the aid of our sister lobbying organization, Environmental Defense Action Fund, the law passed in 2012 with huge bipartisan majorities: 373–52 in the House and 74–19 in the Senate.

Depending on the final outcome of BP's case, billions of dollars in fines could help repair the Gulf Coast and improve the lives of millions of people. The road map for restoration is the Louisiana Coastal Master Plan, which EDF helped shape. It lays out an ambitious but achievable set of projects along the Louisiana coast. Now we are working to ensure that the National RESTORE Act Comprehensive Plan will direct funding to those projects, to slow and stop the loss of wetlands and add back new wetlands in the decades ahead.

RAISING THE BAR: Our Mississippi River Delta objectives by 2015

- \$5 billion of RESTORE funds are secured for priority restoration projects.
- Design process has begun for an improved navigation system to meet New Orleans's port needs while letting most Mississippi sediment and freshwater be reintroduced to the wetlands.



Health

OUR GOAL ▶ Safeguard human health by reducing or eliminating environmental threats, including toxic chemicals and pollution.

THE CHALLENGE

Many chronic health conditions are on the rise, including diabetes, heart disease, childhood cancers, neurological impairment and reproductive disorders. Every week, more research points to the significant contribution that environmental factors make to these disease risks—factors such as exposure to toxic chemicals and air pollution.

Policies to reduce these risks have not kept up with the science. In 2009, the President's Cancer Panel recommended reform of U.S. chemicals law, stating, "The true burden of environmentally induced cancer has been grossly underestimated." With too little public information about the risks, there is too little market demand for safer alternatives.

THE SOLUTION

We must reduce human exposure to chemicals that we already know are dangerous. Just as important, companies must generate data on the health effects of the tens of thousands of chemicals now in use that have not been adequately tested—and of new chemicals before they are allowed on the market.

For the air we breathe, reductions in harmful particulates, ozone smog and air toxics will save hundreds of thousands of lives and reduce health care expenditures by an amount far exceeding the cost of reducing the pollution.

Reform U.S. toxic chemicals policy



Advances in some states and in Europe are driving calls for reform of chemical safety law at the federal level. EDF will work with other environmental groups, businesses, and labor and health organizations to build support for legislation to strengthen the Toxic Substances Control Act, which has not been updated since 1976.

A stronger law will require several major changes: prompt action to reduce the use of chemicals known to be of high concern; generation of health-effects data on inadequately tested chemicals and on new chemicals prior to market entry; and expanded public access to data. Manufacturers and retailers can use this information to decide what chemicals should be in their products and stores.

Meanwhile, EPA is striving to make maximum use of its own limited authority under current law. This presents an important opportunity to drive the chemicals market toward safer alternatives. We also are seeking to modernize the outmoded methods used to test and assess the risks of chemicals.

RAISING THE BAR: Our toxic chemicals objectives by 2015

- We build and help lead a coalition of health, environmental, labor, business, consumer and environmental justice groups to achieve fundamental reform of U.S. chemicals policies.
- New legislation is enacted that significantly improves the Toxic Substances Control Act and ensures that only fully tested and safe chemicals are allowed to enter and remain on the market.

Chemicals' health effects must be adequately understood.

Achieving our air pollution reduction goal could save 30,000 lives a year.

Accelerate innovation through corporate partnerships



Manufacturers and retailers alike are aware of the intense public scrutiny surrounding how the products they make and sell may affect health. To speed the introduction of safer alternatives to toxic chemicals, EDF will use corporate partnerships to leverage the retail supply chain and the flow of capital investment.

In our partnership with Walmart, we aim to influence consumer product manufacturers to replace toxic ingredients with safer alternatives, promoting production changes that embrace green chemistry principles. By widely communicating the results of our work, we aim to spur even broader change.

RAISING THE BAR: Our health partnership objectives by 2015

- Reduction targets are set for key chemicals of concern in major Walmart product categories, and guidance is provided to suppliers on principles for chemical substitutions.
- The chemical screening tool EDF developed for the Walmart supply chain is adopted for use with textiles and apparel.

Cut air pollution from power plants and transportation



A court ruling requires EPA to develop an effective new approach to reduce major sources of air pollution. Today 90 million Americans live in areas where soot from power plants or oceangoing ships exceeds federal limits. We aim to reduce this pollution by 75% through a combination of regulatory and legislative action, saving an estimated 30,000 lives a year.

In the face of legal challenges, we will defend EPA's landmark national emission standards for mercury, arsenic and acid gases that are discharged by coal- and oil-fired power plants. Stronger limits on power plant pollution favor a shift away from coal and oil toward natural gas and renewable energy like solar and wind. We are working to ensure that increased natural gas production will not result in increased health risks to communities.

Air pollution from large oceangoing vessels disproportionately affects low-income communities adjacent to major ports. We will advocate the use of new federal regulatory authority that offers an important opportunity to address this part of the air pollution problem.

EPA has proposed standards that by 2025 would reduce, by 70% or more, the pollutants from cars that cause smog and soot, which harm the health of millions of people, especially children. Together with the American Lung Association, state pollution control officials and others, we are working to ensure that EPA finalizes these standards promptly.

RAISING THE BAR: Our clean air objectives by 2015

- Sulfur and nitrogen pollution from power plants is cut by 75% from 2005 levels, and mercury pollution is reduced substantially.
- Substantial reductions of diesel emissions from marine sources and port-related transportation are achieved in all continental U.S. ports.
- National limits are secured on dangerous smog- and soot-forming pollutants from new cars.



As we add new areas of focus, we must also subtract.

Work we have discontinued

We must be more disciplined than ever in choosing the work we do. As we add new areas of focus, we must also subtract. We have wrapped up some work that had reached a natural conclusion, discontinued projects not central to our goals, and reached out to other organizations to take over parts of our work.

Antibiotics

While we remain open to opportunities to raise awareness among corporate purchasers about antibiotics practices in food production, we no longer have a specific effort geared toward antibiotics.

Coral reef wildlife trade

EDF and its allies had sought to protect coral reef ecosystems by ensuring that corals and aquarium fish sold in the United States (80% of the world market for corals) would be collected safely. We built the scientific case and helped draft legislation, but after the death in 2012 of Senator Daniel Inouye (D-HI), the powerful senator we had been cultivating to champion the bill, it has proved impossible to pass this in the current Congress.

International environmental lending

In the past, EDF staff played a critical role in improving environmental lending standards for the World Bank and other public and private international financial institutions, as well as building capacity in nonprofit groups in developing countries to monitor investment from these institutions. Resources are not available to take this work to scale. We will continue to engage with these institutions, however, where such work advances other program goals.

Living cities

Our urban work is no longer a separate program, but parts continue within our major goal areas. Our clean air work, for example, continues under our health goal, and transportation is part of our climate work. We phased out diesel retrofit work in New York and California, helping local groups take over this effort where possible.

Nanotechnology

Our Nanotechnology Risk Framework was developed to provide a risk mitigation option for companies, in the absence of a regulatory solution. Now this framework has become part of the basis for new guidance issued by the International Standards Organization (ISO), and our efforts have shifted toward the regulatory process.

Some local ecosystems

Changes in the focus of our Ecosystems work led us to end river herring restoration and wetland mitigation work in North Carolina and on Long Island (largely transferred to a local group); various regional projects in Texas (spun off to newly created watershed organizations); Hetch Hetchy restoration in California; and a number of land and wildlife projects in Florida, Tennessee and the Southwest.

Our core capabilities: What's needed to deliver on our goals



Today's increasingly networked world has opened new opportunities for EDF to tap the knowledge of far-flung experts, organize powerful new partnerships and use advanced online communications tools to reach out and persuade. To take full advantage, we must perfect new technical skills, listen more attentively and learn to speak the language of those we want to engage.



From inception to full implementation

OUR GOAL ▶ Design our work for broad-scale impact, and forge the partnerships needed to deliver transformational change.

The measure of our work has to be what changes in the world. Often we have assumed that the power of our ideas alone would cause them to be implemented fully. Going forward, we will not only foster innovative ideas but hold ourselves accountable for their effective implementation on a large scale. We look to our partners and allies to both contribute new ideas and help put them into practice.

Track emerging issues

From our chief scientist to our program experts in the field, EDF staff constantly are assessing the areas where emerging science and technology could make environmental progress more promising—or more urgent. Our strategic plan is not set in stone, because new problems and opportunities can arise at any time. We will be open to new ideas no matter where they might originate. Some of EDF's greatest work has been pioneered by entrepreneurs within the organization who envisioned world-changing solutions to problems even before the problems had been fully articulated.

For example, our California staff realized the potential of water marketing and enlisted powerful agricultural and municipal partners in their bold experiments. In China, an EDF economist sensed openness to a market-based approach for reducing pollution and began to work with the country's leaders, laying the cultural and policy groundwork for carbon trading. Our oceans staff saw the power of catch shares to revive America's fisheries long before Congress warmed to the idea.

To foster this entrepreneurial spirit, we will provide seed funding, mentoring and evaluation for early-stage explorations, based on a venture capital model. We will seek to identify breakthrough ideas and help develop them into strategies for transformational change, with milestones built in for accountability. Not every idea will blossom, but the rewards will be worth the risk.

Build strong partnerships

EDF seeks to build strong partnerships, including unexpected ones. Many elected officials and other decision makers never had witnessed this sort of environmental partnership until we walked through their doors with unlikely allies such as ranchers, fishermen or corporate leaders. It makes a powerful impression.

Our partners bring great ideas to the table. For example, the idea for our wildlife conservation program on private lands came from listening to potential partners and incorporating their needs. Those partners in turn have spread our ideas further, including through the group Sustainable Conservation.

We will build on our current partnerships and enlarge our capacity to forge new ones. As we take on some of the most difficult environmental problems internationally, the need for new alliances will multiply. The varied cultural backgrounds, history and experience that our partners bring to the table will challenge us and strengthen our effectiveness in finding solutions.

Our partners contribute new ideas and help put them into practice.

Each new project at EDF begins with a theory of victory.

From the outset, plan for full implementation

When we consider a new area of work for EDF, we first lay out a theory of victory, a scenario that outlines the steps we need to take and the obstacles we need to overcome to solve the environmental problem in question. In the past, some of these work plans extended only as far as a successful demonstration project. Now we will lay out what is needed for full implementation and determine whether we intend to enlist partners to roll out an idea or implement it on our own. We will ask ourselves:

How: Can we envision clearly how our activities will add up, over time, to transformational change?

Who: Have we mapped out the work with potential allies at an early stage, listened attentively to their perspectives and arrived at a shared agenda?

When: What are the markers of change and what timetable will we set for ourselves and our partners?

To achieve the greatest likelihood of success, we will bring in our collaborators early on, find the ways they work most effectively and allow them the opportunity to modify our initial thinking.

Advance smart policies with smart politics

Many environmental policies stem from legislation enacted on Capitol Hill, where EDF's long-standing tradition of bipartisanship enables us to cultivate important allies on both sides of the aisle. No environmental legislation has ever been passed without bipartisan support, so we are committed to engaging with the political system in a nonpartisan way.

EDF's legislative lobbying expenses are limited strictly by tax law. Therefore we work hand in hand on legislative matters with our sister organization, Environmental Defense Action Fund. The Action Fund receives non-tax-deductible contributions and is not constrained by such spending limits.

Stand ready to defend environmental law

Opponents of environmental protection often are quick to challenge laws and regulations in court, even going so far as to question EPA's authority to regulate pollution. When important protections come under attack, our legal team frequently joins forces with public health groups, state attorneys general and other environmental organizations to mount a strong defense.

EDF and allies have successfully argued such cases all the way to the U.S. Supreme Court. Although litigation is never our first option, we will continue to maintain a strong capacity to defend our gains when threatened.

Nurturing people and ideas



OUR GOAL ▶ Cultivate the human capital and the management that enable us to identify, apply and hone the best ideas.

People come to EDF to make things happen. They are drawn by our track record of taking on the hard challenges and finding practical answers.

EDF must remain a destination for the best and the brightest. But in an increasingly interconnected world, we also will be poised to spot the most excellent ideas no matter where they may arise. The changing nature of communications lets us tap rich new sources of innovative thinking around the world and create closer working relationships with peers and partners, even at a distance.



Attract a critical mass of diverse talent

We must achieve a greater range of perspectives and expertise by attracting and retaining more diverse talent. We face a growing need for scientists and economists, lawyers, policy experts and communications professionals. As our international activities expand and as the face of America changes, a diverse staff will deepen our cultural understanding and our ability to win results.



Give staff the freedom to get the job done

We have been fortunate to attract more than our fair share of the world's best talent. Why do such exceptional people choose to come to EDF? One reason is that smart, committed people want the freedom to get the job done. They don't thrive on bureaucracy, paperwork or unnecessary management intervention. We want to be known as a place where staff are given the authority and accountability to produce real results.



Define a variety of clear career paths

We must understand what our staff are looking for in their job experience and then deliver on it. For example, some scientists may want a career path that focuses on science, not management. Other staff might appreciate opportunities to rotate among multiple projects and develop solutions to complex, multisystem problems. We will create a variety of career paths and help managers and employees understand the options fully.



Make staff development part of everyone's job

A strong institution is always nurturing its future leaders, so developing our staff will be a greater part of everyone's job. An employee's direct manager is the most influential driver of retention and performance, so we will provide the training and support for both new and senior managers to mentor and coach successfully.

Enable cross-functional communication and collaboration

As EDF has grown, it has become more important—and more challenging—to promote strong internal communications. We must help all staff stay well-informed on EDF's broader endeavors, not just their own jobs. We will promote the free flow of information and ideas across programs and departments and use technology to facilitate collaboration and access.

Expanding our networks will bring broader expertise from around the world.

Develop networks of external experts

EDF will experiment with a more distributed, open-source communications model on selected topics. We will build the technological tools that support external networking and train staff in the skill of managing through networks. To make these networks effective, we must establish close connections with leading experts outside the organization. This will mean encouraging staff to become more involved in their peer communities and more open to sharing the knowledge gained. The promise of this approach already can be seen in our partnerships on oceans with Stanford and Duke Universities.

Create an alumni network

When staff members leave our organization, they should not leave our network. As they continue to flourish elsewhere, they can become emissaries and advocates for our ideas. We will build and cultivate an alumni network of former employees, consultants and interns to give us access to the broadest possible pool of experts while strengthening our ties to other organizations.

Communications and persuasion



OUR GOAL ▶ Engage and persuade key decision makers and the public through a broad set of communication channels.

Even our most compelling ideas can't help the environment unless we convince others to act on them. EDF has long shown an exceptional ability to reach and persuade top decision makers in business, government and media. But the landscape is changing. Now anyone with a computer can be a broadcaster, a lobbyist or both, and communication has become a two-way street: The audience expects to participate. It's a conversation, not a lecture.



Perfect an “audience-centric” approach

We must hone the skills needed to thrive in this new marketplace of ideas. We must identify and understand our audiences, speak their language, reach them where they want to be reached and, most important, listen to what they have to say. To do this, we will help our staff master the expanding array of social networking and other social media tools, identifying the methods best suited to each audience. We'll focus on describing our work in human terms, using memorable stories and visuals.



Craft our messages to build on our strong reputation

When our reputation for sound science and constructive solutions precedes us, others are more likely to give EDF a fair hearing. Each staff member must be mindful of how his or her communications will enhance or undermine that reputation.



In the world of new social media, it would be impossible for all communications to pass through a central press office. Instead, a far broader group of staff will serve as our ambassadors and spokespeople through their public appearances, web postings and blogs. To prepare them for this role, we will build internal programs to ensure broad-based understanding of, and consistency with, EDF's core values and overarching messages. Our inherent optimism, our respect for others, our tradition of civil discourse and our focus on transformational change must come through in all we say and do.



Expand our donor, activist and Strategic Partner communities

We will strengthen and expand our Strategic Partners program and other efforts that give EDF its special ability to reach decision makers. Many of our donors want to do more than write a check, and many activists would like to do more than send email to Congress. Given these trends, we will continue to experiment with numerous additional forms of engagement.



As stewards, we cannot afford to spend a dollar on anything less than its best use.

Investment

OUR GOAL ▶ Secure the funding needed to support our goals and efficiently allocate it consistent with our strategy.

While building our core capabilities, we will strengthen EDF as an institution to attract the investment and sustain the level of talent required to achieve our objectives. In the five years preceding this Strategic Plan, we were highly successful in attracting financial support for our work. We doubled our program budget and increased the number of major donors. Despite today's uncertain economy, we are confident that EDF's bold vision and clear strategy will continue to inspire our current supporters and attract new ones.

Pursue international fundraising

With the prominence of environmental issues worldwide and with EDF's reputation for constructive solutions, we are well positioned to attract support both in the United States and elsewhere. To fund our increasingly global work, we will seek support not only from internationally minded donors in the United States but also from donors in other countries. Beginning with a focus on London and Shanghai, we will approach individuals whose interests align with ours. The locations where we raise funds will sometimes, but not always, overlap with where we are doing program work.

Make efficient and effective use of financial resources

As stewards of our donors' contributions, we cannot afford to spend a dollar on anything less than its best use. We will be scrupulous and disciplined in using funds entrusted to us, and we will hold ourselves accountable by using rigorous metrics to track the return on investment and report results to donors.

Become a model for a low-carbon organization

We must practice what we preach by using energy efficiently and becoming a model for others to follow. We will reduce EDF's carbon footprint by more than 20%, and we will offset our remaining greenhouse gas emissions. In addition, we will continue to reduce our paper consumption and increase our use of sustainable products.



Markets must incorporate the real value of environmental assets.

CONCLUSION

A CRITICAL MOMENT IN TIME

Environmental Defense Fund has undertaken this stage of our work at a critical moment in time. Scientists assessing the state of the environment today see a series of deeply troubling developments, including:

- the current and looming impacts of **climate change**—and the evidence that unless we act now, the economic costs of slowing or reversing the impact will increase dramatically
- the preponderance of unsustainable fisheries in the United States and around the globe, threatening biodiversity of the **oceans** and putting at risk a critical source of protein for much of the world's population
- the escalating pressure on **ecosystems**, including encroaching development, water shortages and the impacts of climate change
- the growing **health** consequences of exposure to increasingly complex combinations of chemicals in our everyday lives

Until we align economic incentives with protecting the environment, these problems will persist and worsen. Until markets incorporate the real value of environmental assets, the collective consequences will mount. We need to unleash transformational change—change that will affect entire sectors in fundamental ways.

The global stakes are huge and the time horizon is short: In the coming years, we'll either harness markets to protect the environment, or the most serious problems could spiral downward and the opportunity to solve them could be lost.

Fortunately, however, we are confronting these challenges at a point in history that offers more opportunities for transformational change than ever before. We at EDF are full of hope about what we and our supporters and allies can accomplish together.

Through our commitment to science and economics, we can make real progress toward preserving the natural systems on which all life depends. We can begin to stabilize Earth's climate in time to avoid extreme disruptions; we can protect oceans by designing sustainable and healthy fisheries management; we can conserve and restore critical wildlife habitat and water systems; and we can preserve and enhance human health by reducing or eliminating environmental threats such as toxic chemicals and pollution.

There is no time to lose. And we at Environmental Defense Fund have never been more hopeful. With the support of our donors and the resolve of our staff, we are confident that we can continue and amplify our work to preserve the vibrant diversity of life on Earth—in this century and those to follow.



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